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Clinical Medicine and Surgery

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★ Editorial ★

J. Marion Sims

Father of Gynecology

A STORY is told by Charles J. Dutton, to the effect that, in the question period following a lecture to a thousand cultured club women, one of them asked him who, in his opinion, had done the most for women. He replied, "Dr. J. Marion Sims." There was a blank silence. Surprised, he asked, "Will those who know about Dr. Sims raise their hands?" *Not a hand was raised!* And this in an intelligent and formally educated company of the very class of human beings who had benefited most from his discoveries and labors!

Even among the members of the profession he adorned, the clamor of a century of new discoveries and inventions has largely drowned out, at least for the younger men, the acclaim which was accorded, in the early and middle Nineteenth Century, to this country boy and general practitioner, who rose to be one of the most famous surgeons in two continents. This year, which marks the 125th anniversary of his birth, is a fitting time to call attention once more to those eternal fundamentals which formed the basis of his success.

James Marion Sims (he always signed himself "J. Marion") was born on a farm in Lancaster County, South Carolina, on January 25, 1813. His father, John Sims,

was an Englishman, and his mother, Mahala Mackey, was of Scotch-Irish descent.

Young Sims attended the common schools in his native town and entered the Franklin Academy in 1825. Later he was sent to the South Carolina College, at Columbia, graduating in December, 1832. He attended lectures at the Charleston Medical School for a year and then went to Jefferson Medical College, Philadelphia, from which he was graduated as a Doctor of Medicine in 1835, in spite of the protests of his father, who thought that the medical profession offered his son no future.

Immediately after graduation he began to practice in Lancaster, but became discouraged and moved, within a few months, to Mount Meigs, Alabama, where the people soon recognized him as being a good doctor. While living there he volunteered in the Seminole War, and when he returned he decided to make a start in the capital city, Montgomery, which he did in December, 1840.

He soon gained a reputation as a bold and successful surgeon and presently established a private hospital. It was in this hospital that he worked out what came to be known as the *Sims position* and the *Sims Speculum*, and performed the first successful operation

for vesicovaginal fistula in the history of surgery.

Less than a hundred years ago it was more dangerous for a woman to have a baby than for a soldier to go into battle. In those days, before the era of antiseptics and asepsis, a shocking number of mothers died in childbirth; and of those who survived, many would rather have been dead, because the primitive midwifery of the time frequently resulted in vesicovaginal fistula—a loathsome disorder and incurable, because no one could see the lesion nor get at it to repair it.

The story of the invention of the speculum which bears his name is most interesting and, like that of Laennec and the stethoscope, it shows how a keen and original mind will at once grasp the possibilities inherent in an apparently casual observation.

It seems that, on a day in 1845, a woman who had been thrown from a horse came to Dr. Sims complaining of symptoms which suggested dislocation of the uterus. In examining her, the doctor placed her in the knee-chest position and inserted two fingers into her vagina to palpate the uterus. To his great surprise, air rushed into the vagina and fully dilated it, exercising sufficient pressure to replace the retroverted uterus. At once he thought of his numerous patients with vesicovaginal fistula and, leaving everything else, he rushed to a hardware store and procured a set of pewter spoons of various sizes. Hurrying back to the hospital he placed one of his fistula patients in the knee-chest position, bent the bowl and the end of the handle of a spoon at right angles to the shaft and inserted it into the vagina. The pressure of the atmosphere did the rest and he uttered the classical exclamation, "I saw everything as no man had ever seen before. The fistula was as plain as the nose on a man's face."

But success in the cure of this distressing condition awaited the discovery of some substance which would hold the wound together, and would not carry infection—the silver wire suture, which was suggested by seeing one of the brass springs that were used on men's braces before the days of India rubber. The first wire suture was hammered out of a half-dollar by a silversmith in Montgomery, and with these crude instruments Sims performed the first successful operation for vesicovaginal fistula, thus laying the foundation for his later fame, and saving the lives of thousands of women yet unborn.

In 1853 Dr. Sims established himself in New York City, where, in February, 1855, he organized the State Hospital for Women and became the founder of the modern science of gynecology.

In 1861 the doctor made his first trip to Europe, where he was received with the greatest enthusiasm and respect and operated in the presence of the most noted surgeons of that day. He made an excellent impression in medical circles and his fame was noised abroad, so that he was called in consultation by the best people all over Europe and enjoyed a very lucrative practice.

He, whose early patients had been largely slaves, became the personal physician to the Duchess of Hamilton, and in the summer of 1863, while attending her at Baden-Baden, he wrote his first book, "Clinical Notes on Uterine Surgery," which, because it contained many new ideas, was rejected by the "authorities" of his time, even as such books are frowned upon today by the same sort of people. Napoleon III, Emperor of France, called him to treat the Empress Eugenie, and he cured her. Truly, the poor, sickly Southern country doctor had arrived!

After the close of our Civil War, Dr. Sims returned to New York and resumed practice, but when the Franco-Prussian War broke out, in 1870, he returned to France, for which he had a great affection, and organized the Anglo-American Ambulance Corps, of which he became Surgeon-in-Chief. For this service the French Republic made him a Commander of the Legion of Honor.

From that time until his death, which occurred on November 13, 1883, he lived alternately in Europe and America, and wherever he was he was always keenly and actively practicing the profession he loved. In 1876 he was chosen president of the American Medical Association and held many other official and private positions of great dignity and honor.

His preeminence was not alone in the field of gynecology, for he was one of the foremost general surgeons of his time, being one of the first to enter the abdomen, freely and boldly, in order to repair the effects of wounds in that locality. He was also among the first to remove the superior and inferior maxilla and to perform cholecystotomy.

His contributions to medical literature were not numerous, but were all of the highest importance and blazed the trail for

the development of many fields in modern surgery.

It is not as an author, however, that Sims will be longest remembered, but as consummate master of the art and practice of surgery. It has been said of him that he had "The brain of an Apollo; the heart of a lion; the eye of an eagle; and the hand of a woman."

In his earlier days his health was frail. He suffered from malaria, contracted in the swamps of Alabama, and probably from pellagra (he was never well nourished in those days), though that disease was not reported in the United States until 1864. In his later life his physical condition improved, but he probably would not have survived if he had not had a large reserve of native vitality.

Personally, Sims was most attractive. Endowed by nature with a well proportioned body and a winning face, he combined unbounded and boyish enthusiasm and an impulsive, warm-hearted and affectionate nature with the greatest firmness and earnestness of purpose, so that he was not only respected and honored, but loved by all who knew him.

This, then, is a little story of a country doctor who fought against poverty and obscurity, and, in his early days, even for health and life itself, and at last, by the sheer force of his genius, industry, and attention to all things pertaining to his profession, came to be welcomed as an associate by the medical giants of his day and as a guest by the Emperor Napoleon.

The educated man is a man with certain subtle spiritual qualities which make him calm in adversity, happy when alone, just in his dealings, rational and sane in the fullest meaning of those words, in all the affairs of life.—RAMSAY MACDONALD.

Cancer

ASTONISHING as it may seem to the uninformed, there is a good deal of evidence to suggest that many, if not most of the large institutions (endowed or other) where the problems of cancer are being studied are loath to consider or experiment with any new ideas along these lines which do not originate in their own staffs or those of similar institutions, even when such ideas have a reasonably substantial clinical background.

Moreover, the officially controlled medical publications manifest no keen eagerness to

publish papers embodying "heterodox" ideas on cancer, or those which have not been officially blessed by the "authorities."

It, therefore, becomes the duty of the truly independent publications to present to their readers some of these new ("heterodox") ideas which are reasonable and well substantiated, in order that the profession may have an opportunity to consider and experiment with them, and thus establish their value, or the lack of it.

We take pleasure in presenting to our readers, this month, three such communications, two of which deal with the etiology of malignant disease and one with its treatment. We do not, of course, vouch for the validity of any of the conclusions of the authors of these papers, but we are convinced of their sincerity of purpose, and the ideas they express seem to be entirely reasonable, even if time and further study should prove them to be not well founded. Dr. Cornell's paper, in particular, seems to offer definite hope of amelioration, if not of cure, to the thousands of sufferers from this devastating group of diseases.

We shall be glad to receive *constructive* suggestions from our readers along these lines, and to learn their opinions of our efforts to keep them in touch with the recent promising efforts in this important field, even when such efforts appear, at first glance, to be rather "revolutionary."

What we see depends mainly on what we look for.
—JOHN LUBBOCK.

Dextrose in Diphtheria

SINCE the advent of antitoxin in the treatment of diphtheria, it is rare to see, in private practice among intelligent people who call a physician early in case of illness, the terribly toxic cases which were rather common in pre-antitoxin days. In hospital practice and among unenlightened people, however, such cases are still seen, where the patient has passed the time when the antitoxin is most effective, and other measures must be added if the life is to be saved.

Among these adjuvants in late and extremely toxic cases of diphtheria, the administration of dextrose, to feed the damaged myocardium and normalize the disturbed carbohydrate metabolism (as recommended by Darrow et al., in *Am. Journ. Dis. Child.*, 49:60, 1935), seems to offer the most encouraging possibilities.

In outline (to be varied to fit each individual case), this treatment consists, according to Darrow's plan, in addition to the large doses of antitoxin (50,000 to 100,000 units or more, given intramuscularly and intravenously), which are *always* to be used, of the employment of large intravenous infusions (250 to 600 cc.), given *slowly* (in from two to three hours), of 10-percent dextrose in physiologic saline solution, repeated daily until the danger seems to be past. A blood transfusion is sometimes helpful in very severe cases.

Most authorities now favor the use of a simple dextrose solution, without the salt, except in cases where the kidneys are undamaged and where the blood electrolytes are dangerously low. As the renal function is more or less seriously impaired in most of these cases, the plain dextrose solution is the one of choice.

If the giving of a large, slow intravenous infusions is difficult or impracticable, one may follow the practice of our British Confreres (Benn, Hughes, and Alstead, *Lancet*, 1:281, 1932), and give 40 cc. of a 50-percent solution intravenously, using a hand syringe. One need *not*, however, follow their rather complicated regime of giving insulin, checked by frequent blood-sugar estimations, as the best consensus now is that this adds nothing to the value of the method.

To obtain the best results, the dextrose treatment should be used *routinely*, without waiting for signs of myocardial damage, in all diphtheria cases (1) ill more than three days before receiving antitoxin; (2) *all* "bull neck" types; (3) all cases showing marked albuminuria; and (4) all postnasal cases and malignant types of any character.

The results of this plan of treatment are truly gratifying. Whereas the mortality in critically ill diphtheria patients has usually been between 30 and 60 percent; the addition of dextrose has, in a considerable series of cases, reduced it to 12-percent.

When the alarming symptoms have been controlled, the dextrose need no longer be given intravenously, but may be administered, in doses of from 4 to 8 ounces (120 to 240 Gm.) daily, by mouth, dissolved in lemonade, or, if this is impracticable for any reason, in simple solution by rectum. This method should be continued for from ten days to three weeks or more after the patient is first seen, depending on the condition of the patient.

Here is a method of treatment which can be carried out by any reasonably intelligent general clinician, and which should save several lives every year, resulting in the augmentation of the professional reputation of all those who use it.

NEXT MONTH

Dr. S. W. Brownstein, of Chicago, will present a condensed report of 120 cases of gonorrhea treated with sulfanilamide, giving details of the technic and results of such treatment.

Dr. F. LeBlanc, of Chicago, will discuss the oxidation-reduction reactions in the human body, elucidating some of the ideas of J. E. R. McDonagh, of London, Eng.

Dr. Lindon Seed, of Chicago, will describe, in his customary lucid and practical style, the postoperative management of thyroidectomy cases.

COMING SOON.

"Anal, Rectal, and Sigmoidal Prolapse and Procidentia: A Suggested Classification," by Harry E. Bacon, M.D., F.A.C.S., Philadelphia, and Theodore F. Reuther, M.D., Effingham, Ill.

"Occult Cerebral Hemorrhage of Traumatic Origin (A Case Report)," by Roy S. Hubbs, M.D., Sheridan, Wyo.

HEALING WEARINESS

*Long days, strong days, days of light and labor,
Pour your healing on my troubled soul;
Fill my hours brimful, to overflowing,
Bringing weariness to make me whole.*

G. B. L.

★ *Leading Articles* ★

The Practical Significance of Gastroscopy

By RUDOLF SCHINDLER, M.D., Chicago,
Associate Professor of Medicine, University of Chicago

ATTEMPTS to develop the technic of endoscopy of the stomach, from 1868 to 1923, were unsuccessful. Although the clinical significance of gastroscopy was clearly demonstrated in 1923, its daily practical use was still impossible because the introduction of a rigid tube into the stomach was not entirely safe. In 1923, however, the invention of the flexible gastroscope

Technic

Since the diameter of the flexible gastro-scope is that of a small Ewald tube (8.5 to 11 mm.), its introduction is comparable to the passage of a simple Ewald tube.

The local application to the throat of a Pantocaine and Adrenalin (epinephrin) solution produces such excellent anesthesia that the gastroscope may be passed with a minimum of discomfort. A large number of physicians who have undergone gastroscopy have expressed surprise at the speed and complete lack of discomfort with which the entire procedure is carried out. The anesthesia and preparation of the patient require about 10 minutes; the gastroscopy itself, from 1 to 2 minutes.

Gastroscopy is a simple office procedure, requiring no hospitalization whatever except in cases of pyloric obstruction. The patient is able to return to his work after the examination and often is willing to return for

repeated examinations. Gastric ulcers are often followed in our out-patient department by weekly examinations, and as many as 24 examinations have been performed on one such patient. The largest number of gastroscopies we have performed on one patient was 65. Contraindications, like aneurysms and obstructions of the esophagus and cardia, must be excluded before gastroscopy is performed.

Since the technic of gastroscopy is rapidly becoming widespread (and our textbook of 1923 is quite obsolete), three new textbooks,*

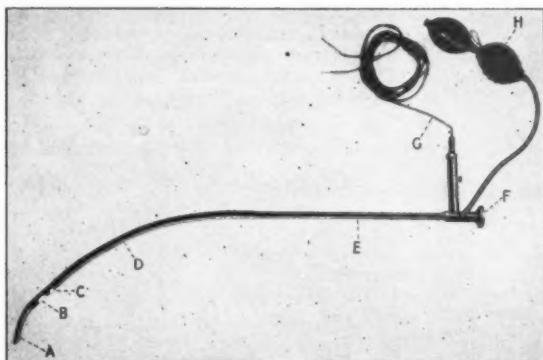


Fig. 1.—The flexible gastroscope, Schindler-Wolf, 1932. (A) Rubber finger; (B) Lamp; (C) Objective; (D) Flexible part; (E) Rigid part; (F) Ocular; (G) Electric cable; (H) Air balloon.*

enhanced the safety of endoscopy of the stomach so that its practical significance became widely appreciated.

Instrument

The present-day gastroscope should not be confused with the open, rigid tube, nor with the closed, rigid gastroscope previously used, nor with the "flexible" gastroscope of 1911. The latter required straightening after introduction into the stomach, which, in itself, was a dangerous procedure.

The modern flexible gastroscope (see Fig. 1), however, remains bent during the entire examination, and may be bent in several planes without disturbing the optical focus.

*All cuts, courtesy of the *Am. J. Digestive Diseases*.

* Schindler, R.: "Gastroscopy: the Endoscopic Study of Gastric Pathology." University of Chicago Press, 1937.

Moutier, Fr.: "Gastroscopie." Masson, Paris, 1935.
Gutzeit, K., and Teitge, H.: "Die Gastroscopie." Urban u. Schwarzenberg, Berlin and Wien, 1937.

containing many colored pictures, have been written, in English, French, and German, in the past two years.

Indications

Even though the general practitioner realizes that this new method is neither dangerous nor particularly uncomfortable, he wants to know what practical value there is in gastroscopy.

It should be stated at once that not every localized gastric disease can be seen with a flexible gastroscope. The duodenal ulcer and the ulcer of the pyloric channel can be found only by x-ray studies; not by gastro-

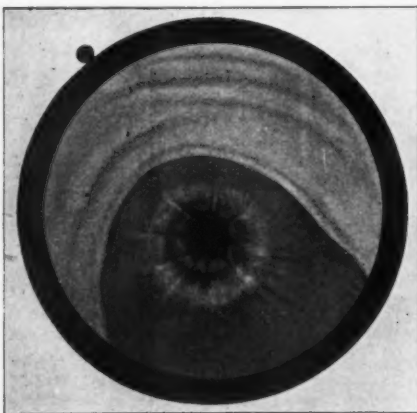


Fig. 2.—Normal pylorus. In the upper part of the picture the lesser curvature is seen; the sickle-shaped fold is the angle. Beneath it, at the end of the antrum, the pylorus appears.

scopy. Rare prepyloric ulcers (ulcers immediately proximal to the pyloric ring), and a few true gastric ulcers which lie in the "blind stripe" of the posterior wall, are also not visualized by the gastroscope. Practically all other lesions of the stomach proper can be seen.

Gastric Ulcer

Most gastric ulcers are clearly seen and their gastroscopic observation is of great value. In the first place, it helps establish the differential diagnosis between the benign and malignant ulcer. This differentiation is often impossible by examination of the gross specimen, and can only be made microscopically.

Benign ulcers can be differentiated from malignant ulcers gastroscopically, because, in the gastroscopic picture, the blood circulation is intact, and variation in color is much more pronounced than in the gross specimen. Moreover, in the gastroscopic view, the gastric mucosa is transparent, permitting visualization of the architecture



Fig. 3.—Benign chronic gastric ulcer of the lesser curvature just above the angle. (At the right side the dark cavity of the antrum is seen; on the origin of the muscular sphincter antri a dark pigment spot. The ulcer occupies the middle of the picture. A part of its edge is undermined.)

of the deeper layers of the stomach. In benign ulcers the edge of the ulcer presents a sharp, punched-out appearance and is sharp even when the ulcer is ragged (see Fig. 3); in a malignant ulcer the edge blends with the surroundings (see Fig. 4).

Second, the healing of an ulcer can best be observed by gastroscopic observations.

Third, concomitant diseases of the gastric



Fig. 4.—Ulcerative carcinoma with thick, reddened wall.

mucosa, such as inflammation, mucosal hemorrhages (purpura), and hemorrhagic erosions, can be diagnosed only with the gastroscope. These observations are of utmost importance in the effective treatment of the patient.

Carcinoma

Every patient over 35 years of age, who sees his doctor because of slight abdominal distress, beginning anorexia, and loss of weight, should be suspected of having early carcinoma, if careful physical examination fails to reveal any other disease. Nevertheless, most physicians (including specialists) wait a long time before carrying out a thorough examination.

The reason for this is the general belief that there is no definite cure for cancer of the stomach. This opinion, however, is entirely erroneous. Certain types of gastric cancer can be cured by surgery, and ten-year cures can be obtained if the diagnosis is made *early*, when the tumor is still small and metastases have not yet occurred.

Unfortunately, exploratory and palliative laparotomies are likely to destroy the confidence of the public and the doctor in the cure of cancer. Indiscriminate exploratory laparotomy has a high mortality and the results are often discouraging.

All gastroscopists agree that gastroscopy reduces the number of valueless laparotomies by recognizing the inoperable lesions, and conversely, encourages surgery in the favorable cases, where a cure can be effected.

If physicians could be induced to examine their patients with the gastroscope early in the disease, a greater number of operable tumors would be found. In this way a favorable cycle could be established, wherein the early diagnosis and ultimate cure of cancer would increase the confidence of both physician and patient, and this increased confidence, in turn, would lead to earlier diagnostic procedures and more cures.

There are several macroscopic types of gastric carcinoma which are recognizable gastroscopically:

Type I.—The polypoid carcinoma offers a good prognosis.

Type II.—The localized carcinomatous ulcer gives a good prognosis and may be resected if diagnosed early.

Type III.—The infiltrative carcinomatous ulcer gives a very dubious operative prognosis and can seldom be operated upon successfully.

Type IV.—The diffusely infiltrative carcinoma almost always gives a fatal prognosis, even when operated upon early.

It is of utmost importance, therefore, that every patient with a gastric carcinoma should have a gastroscopic examination before operation, to determine whether surgery is indicated or whether high-voltage x-ray therapy should be undertaken.

Chronic Gastritis

The most common disease of the stomach has been rediscovered by gastroscopy. In 1922 I described the three most important types of chronic, non-specific gastritis, as seen with the gastroscope.

The case history, physical findings, gastric analysis, and x-ray studies are of no help in differentiating this disease from beginning carcinoma, psychoneurosis, or peptic ulcer. Chronic gastritis can be diagnosed only with the gastroscope.

The treatment is different in each of the three forms of gastritis, although a bland diet and frequent small meals should be prescribed in all of them.

Chronic superficial gastritis is best treated by regular lavages, which the patient quickly learns to perform for himself. It usually heals and only rarely develops into chronic atrophic gastritis.

Not all cases of atrophic gastritis develop from superficial gastritis; some are caused by a deficiency state (liver, iron, vitamin B). There are instances in which the atrophic gastric mucosa regenerates under liver therapy, although the blood picture is not that of pernicious anemia.

Chronic hypertrophic gastritis is a different disease, which often causes severe pain and usually does not heal entirely. It can be controlled, however, by a carefully planned diet and alkalies. If ulcers develop, rest in bed is indicated.

Chronic gastritis is the most common disease in postoperative stomach disorders. Jejunal, marginal, or recurrent ulcers are rarer. Silk sutures which hang freely in the gastric cavity can be seen with the gastroscope. Re-operation is usually necessary in these cases.

Gross Hemorrhage

The x-rays not infrequently fail to reveal the source of a gross hemorrhage. Gastroscopy should be carried out in these cases, as soon as the bleeding has stopped. Often a hemorrhagic erosion or a gastric ulceration will be found to be the source of the profuse hemorrhage. In more severe cases adenoma or myoma may be found.

The ease with which gastroscopy can be carried out depends entirely upon the behavior of the patient. Therefore the patient should consider gastroscopy a minor procedure, which is neither time-consuming nor very disagreeable.

The interpretation of the picture seen gastroscopically naturally requires long experience. This is true, of course, of any diagnostic procedure.

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Heterosexual Administration of Gonadal Extracts in Carcinoma*

(A Preliminary Report)

By BEAUMONT S. CORNELL, M.D., F. A. C. P., Fort Wayne, Ind.

THE clinical experiments on cancer patients here reported were preceded, during the past nine years, by a series in my own practice, in which numerous inoperable cases were empirically given injections of various tissue extracts, without remarkable results. Gonadal extracts given homosexually (testicular extract to men and ovarian extract to women) were then found to be without appreciable effect upon malignant growth.

In July, 1937, I began, for the first time, administering gonadal extracts heterosexually (testicular extract to women and ovarian extract to men) in a number of inoperable cases of cancer. The results were immediately seen to be striking, for regression of the tumors occurred up to a certain point, and pain due to cancer was relieved. A woman, the right half of whose pelvis was filled by a rapidly growing adenocarcinoma of the uterine cervix extending to the level of the umbilicus, noted early relief of pain and exhibited a 20-percent regression of the cancer within the first week of treatment. After six months this patient was still alive, while the carcinoma lay within the pelvis, having lost 60 percent of its original volume, was quite painless, and she herself was in fair general condition.

Other cases, in which patients with cancer of various tissues (breast, stomach, skin) were placed on this treatment, showed relief of pain and tumor regression. The present preliminary report is a description of the extracts used, the method of their administration, and a partial analysis of the results obtained.

Method of Preparing the Gonadal Extracts

Testicular Extract: Fresh bull's testes were denuded of their tunica, weighed, frozen, sliced, dried in a warm air current, and pulverized. The powder was twice extracted for 24 hours each time with petroleum ether, and this extract discarded. (It was determined by clinical experiment that the ether extract had no appreciable effect on carcinoma.) The residue was then well covered with water and extracted, with constant agitation, for 4 hours, at a temperature of 42 degrees C. Enough water should be used so that the resulting extract represents 11.5

grams of fresh tissue per cubic centimeter. After filtering through filter paper, 0.2 percent of cresol is added as a preservative and the extract cooled for 24 hours and again filtered to remove precipitate. It is well, after passing it through porous filtering candles, to allow the extract to stand for a week or two until equilibrium has been established. Finally, after a second ultrafiltration, it is tested for bacterial sterility by culture, and placed in rubber-capped vaccine bottles.

Ovarian Extract is made in exactly the same manner as the testicular, the whole ovary of the cow being used.

Administration of the Extracts

The average patient needed the equivalent of 100 grams of fresh tissue daily for the first month of treatment. In the case of exceptionally large tumors, as much as 300 grams equivalent were sometimes needed daily for a few days at the beginning of treatment to insure regression. After a month, the dose was usually reduced to 70 grams equivalent daily, or still more reduced, depending upon the behavior of the tumor. Where radiation therapy or surgery was used in conjunction, a return to the full daily dose of 100 grams equivalent daily was made, and so maintained for two or three weeks following these procedures. Finally, a smaller "maintenance" dose was given for many months.

The injections were given intramuscularly in the buttocks, the skin being chilled with ethyl chloride. Often, 1 cubic centimeter of 1-percent Novocain (procaine) solution was added to the extract to ease the pain of injection, Aspirin (acetosal) given, and heat applied locally to relieve the local soreness and stiffness resulting therefrom.

Results of Treatment

Sixty (60) cases of carcinoma were treated by the heterosexual administration of gonadal extracts, as above described. The oldest cases have received treatment for six months, the newest only a few weeks. The beneficial results noted as a result of treatment were: Relief of pain due to cancer; regression of the tumor; prevention of metastases.

Relief of pain was a constant and striking feature, and was apparently due to re-

*Received for publication March 18, 1938.

gression of the tumor, with easement of tissue tension. In all cases the patient, if previously in pain from cancer, volunteered cessation of this pain early in the treatment, sometimes as early as a few hours after the first injection, often after the second or third injection. Soreness, as in a breast cancer, likewise disappeared early. The relief was permanent as long as enough extract was given. Return of pain meant regrowth of the cancer and called for, and responded to, larger or more frequent injections. In numerous cases, patients experienced their first restful nights in weeks, following their first or second injections. In some moribund patients, the extracts were given solely for the relief of pain, and proved very effective.

Regression of Tumor: The degree of tumor regression varied from 10 to 90 percent in 30 days' treatment, and occurred in 55 of the 60 cases treated. Of the 5 cases in which regression failed to occur, 2 had been previously subjected to very intensive x-ray therapy; 1 was associated with extreme systemic infection; and in 2, no cause for failure of regression could be detected.

In young cancers (under one year of age), where there had been no previous radium or x-ray therapy, very marked regressions occurred. In this series, one primary cancer of the throat, six months old, almost completely disappeared, and there were at least 20 cases where rather large but young metastases completely disappeared in association with regression of the primary tumor. Young, non-irradiated cancers showed from 80 to 90 percent regression in size during 30 days' treatment with gonadal extracts given heterosexually. Tumors over two years of age, even though not previously irradiated, showed, on an average, only 50 percent reduction in 30 days' treatment. Unfortunately all tumors, irrespective of their ages, which had received previous x-ray or radium therapy, showed some resistance to regression by this treatment. The degree of this resistance varied in direct proportion to the intensity of the previous radiation. In most tumors, where the previous radiation had not been too intensive, a 20 to 40, and at times even higher percentage of regression was obtained, during a month's treatment.

Prevention of Metastases: In no case in this series were any metastases seen to form. This was not surprising, inasmuch as the effect seemed to be in the opposite direction; i.e., toward regression of both primary and secondary tumors. This is not to be taken as a guarantee that new metastases may not in the future be found to form during this treatment, but was merely true for the time during which experiments are prosecuted.

Exceptions: The 5 cases noted above were exceptions to the rule. In one of these cases, where very intensive radiation had recently been employed, not only did regression not occur, but actual growth took place, with pain and metastasis formation, during the injections. In the other irradiated case, which failed to regress, pain was, however, relieved and no metastases were noted. In the case associated with severe systemic infection, no pain had been present, and no metastases were noted. In the two cases which failed unaccountably to respond to the injections, no appreciable growth took place, no metastases formed, and pain was relieved.

Effects of Age of Tumor and Previous Radiation

As the experiments progressed, it became obvious that tumors which had received previous radiation therapy showed a more or less marked resistance to the effects of the gonadal treatment. In 3 cases this resistance was complete, and these were precisely the cases out of the entire series who had received the most intense x-ray therapy. Nine (9) others, whose previous radiation had been less intense, showed considerable tumor regression, varying from 10 to 60 percent, following 30 days' treatment. In this irradiated group, neither the age of the tumor nor the age of the patient could be shown to bear any relationship to the degree of regression obtained. The oldest cancer (3 years), which had received only moderate radiation, showed a 25-percent regression, whereas the youngest cancer (4 months), which had received the most intense radiation in the entire series, failed to show any regression at all.

In 24 cases of cancer, where no previous radiation had been used and in whom the ages of the tumor could be fairly judged, those under twelve months of age showed from 10 to 30 percent regression in the first week of treatment. One of the youngest (4 months) regressed 90 percent in four weeks' treatment. The oldest (7 years) regressed only 30 percent in four weeks.

It was apparent that the age of the tumor was a definite factor in predicting the degree of regression, because resistance was somewhat proportional to the tumor's age. But this was a much less important factor than previous radiation therapy in creating resistance to regression. The most remarkable regressions, including the several instances of total disappearance of metastases, all occurred in young cancers, usually under six months of age. Nevertheless, the age of the tumor was not so great an obstacle to regression as might be inferred. A group of four persons (ages 66, 66, 68, 74), with tumors aged 2, 2, 1, and

2 years respectively, showed, after two weeks' treatment, 30, 10, 30, and 25 percent regressions; while a group of four persons (ages 58, 59, 58, 61), with tumors aged 14, 8, 7, and 8 months respectively, showed, after two weeks' treatment, 10, 25, 50 and 10 percent regressions.

The Irreducible Remnant

In the majority of cases, the regression was obtained early in treatment. At times, as much as 30 percent regression was seen to have occurred within a few hours of the first injection. Usually no further regression was obtained after the fourth week of treatment. Therefore, in the majority of cases, the patient was left with a "core" or remnant, which resisted all further regressive effects of the gonadal treatment. *This remnant did not grow as long as the treatment was continued, nor did metastases form.* On cessation of treatment, however, regrowth occurred sooner or later. It was felt that the remnant represented the oldest cells in the tumor.

In 6 cases, intensive x-ray treatment was used to remove the remnant. These cases continued to receive full doses of gonadal extract during radiation and for two weeks afterward, and were then placed upon maintenance doses. In one case of cancer of the sigmoid, after two weeks of gonadal treatment, with relief of pain and of intestinal stenosis, operation was undertaken, while the gonadal treatment was continued. It was felt that at least an interim favorable to x-ray or surgical treatment was presented in many cases where otherwise both of these procedures would have been impossible.

In not a few cases the extract-resistant "cores" proved equally resistant to x-ray therapy. In several cases, the gonadal treatment undoubtedly rendered the tumors more radio-sensitive than they had formerly been. Surgical removal of the remnant was often impossible because of the diffuse character of the lesion, its vascularity, or the poor general condition of the patient. Where removal was impossible, the gonadal treatment was continued. This left the patient with a regressed, painless remnant, which did not show any signs of regrowth as long as the extracts were given. One such case was kept in such a state for six months, and only became ill after the intensive application of deep radiation.

In using deep x-ray therapy on a remnant, it perhaps ought not to be done at all unless the radiologist feels that he can completely obliterate the mass, because such treatment renders the cancer no longer susceptible to gonadal extracts, and in case complete obliteration proves impossible, the cancer

will soon begin to show growth again, unrestrained by any treatment.

Comment

From the 60 cases treated by the heterosexual administration of gonadal extracts, it became plain that this method of treatment exerted a more or less profound effect on at least 90 percent of all carcinomas. If the cases which had had previous radiation treatment had been ruled out, the percentage of positive effects would have been higher. The relief of pain, followed by definite tumor regression and the apparent prevention of metastases during the period of observation, suggested that the findings were at least above the rule of chance and that they might indeed prove eventually of some value after due corroboration by other workers.

Publication of these findings was undertaken to stimulate further research along this line. The idea of a "cure" for cancer has never entered the picture at all. A method of treatment has been described which has shown striking results within the time period of the experiments. As to their permanency, it is impossible to conjecture. Thus far no case has shown regrowth of cancer so long as the extracts are administered.

A number of patients died, but the causes of death were usually cardiac failure, arteriosclerosis, pneumonia, and other diseases characteristic of elderly persons. In a few cases where vital organs had been previously infiltrated with carcinoma, death was due to cancer. Nor would it be quite true to say that the treatment is perfectly harmless. After two months of injections of the gonadal extracts, a few showed a sudden weakness and pallor, which was believed due to protein intoxication.

At the present time some evidence has accumulated that the gonadal extract may be effectively given by the mouth. If such proves to be the case, this factor of protein intoxication may be eliminated, and it may indeed be possible to keep cases of regressed cancer in an arrested state for many months or even years.

The nature of the regressive process is quite obscure, for the simple reason that it is difficult to persuade cancer patients to permit serial biopsies. The diagnosis was confirmed by microscopic examination of tissue in most instances.

I have suggested the name *Anomin* (a, privative prefix; *oma*, tumor; and *in*, a class of agents), to indicate the substance or group of substances responsible for these results. Thus, "Testicular Anomin" is for women with cancer, and "Ovarian Anomin" for men.

Research is being continued. Cases which have received no previous x-ray therapy are particularly desired. A reliable pharmaceutical firm is assisting me in an attempt to fractionate the extracts and to produce more extracts for clinical experimentation. The effect of Anomin given by the mouth is being watched with interest.

The effects of the heterosexual administration of gonadal extracts in human carcinoma may eventually prove to be nothing more than a remarkable, if unaccountable, phenomenon. Even now, however, the effects in relieving pain and causing regression are extremely challenging and, from the standpoint of treatment, actually useful.

I invite the widest possible investigation of my findings by other clinicians. For animal work, it is suggested that only spontaneous tumors be used, because transplanted tumors may have undergone radical changes during the years that they have been in existence, and it would not be sur-

prising if Anomin had no effect upon them. On the other hand, it is possible that the effects observed on cancer as a result of treatment with Anomin may suggest biologic implications of great importance.

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Evidences of the Infectious Origin of Malignant Neoplasms

By GERRIT JOHN WARNSHUIS, M. D., Detroit, Mich.

THE VIEW that cancer growths are the expression of a peculiar effect on the nuclear elements of the tissue cells, caused by a toxin of bacterial origin, has not lacked for many adherents, in spite of the opposition of many of our best-known cancer authorities who prefer to cling to the time-worn theories of embryonic rests and reaction to mechanical trauma.

The symptoms and progress of malignant disease that suggest the presence of a microbe organism which has anaerobic properties and, hence, readily establishes itself in the body in a chronic form of disease, can be best described by comparing the symptoms of cancer and the course of the disease to those of pulmonary tuberculosis.

Cancer and Tuberculosis

Tuberculosis and cancer have many characteristics in common. This is not an original observation and, in fact, has led some students of the subject to advance the theory that the decline in tuberculosis mortality is directly associated with the increase in the cancer death rate.

Both diseases are alike in their tendency to establish themselves in the human subject in a chronic form, although they do occasionally take on an acute character and progress rapidly to a fatal termination.

Recovery of clinically demonstrable cases rarely takes place spontaneously in either disease.

In each disease we observe a grave state of toxemia, nervous exhaustion, muscular atrophy, malnutrition, and often advanced anemia. Such toxemia and cachexia may be, and usually are, out of proportion to the size and extent of the local lesions and the interference with the parts directly attacked. This very lack of proportion between the systemic effects and the size of the growth offers a powerful objection to the conventional description of cancer as a localized accumulation of cells that have, through trauma and irritation, suddenly taken on a parasitic character.

It is not uncommon to find decided proliferative changes in tuberculosis, comparable to the neoplasms of cancer.

Sometimes the lesions of tuberculosis are confined to a small portion of the body, at other times they may be very extensive, so that the intestines, peritoneum, generative organs, lungs, skin, bones, tear ducts, and eyes may all be affected. The same thing is true of cancer.

While tuberculous meningitis occurs in a small percentage of individuals infected with tuberculosis, the brain and heart appear to be immune. Cancer of the brain

and heart is likewise extremely rare. In this particular, there is a striking contrast between these two diseases and syphilis.

In both diseases the intestinal tract is the most frequent portal of entry. This statement may excite some incredulity in respect to tuberculosis, because of the prevailing emphasis of health authorities on air-borne contagion, but we cannot ignore the impressive array of evidence supporting it. Opie¹, in autopsies made on presumably healthy British soldiers killed in war, found tuberculosis of the bowels in 22 percent.

In a roentgenologic study of 2086 cases of tuberculosis of the lungs, Granet² found definite lesions of the bowels in 37 percent, although the majority of these had showed no stomach or bowel symptoms.

Pulmonary tuberculosis is usually secondary to a childhood infection of the bronchial glands. From these it may spread, by direct extension or by metastasis through the blood, to the arterioles of the lung alveoli. Not only children, but also many adults, especially women, have a habit of swallowing the mucous secretion of the throat and upper respiratory passages, so that an infection originating in these membranes could readily be transferred to other parts by ingestion of the organisms in the sputum and their passage through the intestinal villi and lymphatics³.

The fact that a large proportion of cases of pulmonary tuberculosis show far more active and advanced lesions in the lungs than in the intestines offers no serious objection to the theory that the intestinal tract is the portal of entry or may be the site of the primary lesion. We see similar examples of such remote effects in other diseases. A dental abscess or a tonsillar or sinus infection, for example, when established in a chronic form, may produce very little disturbance locally, but the secondary foci in the heart, bony articulations, and kidneys may be of a very grave and disabling character.

It is not inconceivable that the mucous membrane of the intestines offers a less favorable pabulum for the propagation of the tuberculosis organism than do the lymphatics of the bronchial tree and alveoli of the lungs. The observation, for example, that the Koch bacillus is a facultative anaerobe indicates how easily its ability to maintain itself in one part of the body or another may be determined by the degree of oxygen tension in the diseased part⁴. This dependence of the infection upon the state of oxygen supply in its nutrient medium is a circumstance that assumes no little importance from the standpoint of preventing and curing the disease.

If there exist so many weighty arguments for considering tuberculosis as a disease

which gains entrance to the body through the alimentary canal and which, therefore, is favored by faulty intestinal activity, there are also certain significant facts about cancer which point to a similar conclusion in respect to its origin.

First of all, consider the great frequency of cancer of the stomach and bowels, as compared with other organs⁵. Second, we find that nearly all cases of cancer show a history of constipation, biliousness, or other evidence of intestinal stasis. Third, there is the fact that the course of the disease is sometimes greatly modified by improved elimination.

In addition to such evidence, we may note the statement of a widely recognized authority on cancer. Ewing (quoted) says, "Man is the only animal which enjoys unlimited access to food and suffers from restricted opportunity to empty the bowel, and he is the only animal that suffers notably from gastric and rectal cancer⁶."

More recently some direct evidence has been advanced which may prove highly significant. In the *J. A. M. A.*, January 16, 1937, Claude F. Dixon and Joel L. Deuter- man⁷ report six cases operated upon for cancer of the rectum which terminated fatally because of a liver abscess produced by an anaerobic bacillus which they designate as *Bacteroides funduliformis*. The description of the organism corresponds very closely to that of the anaerobe which Robertson, of Edinburgh⁸, isolated many years ago by his special methods and which he was convinced was responsible for many forms of chronic disease, including insanity, diabetes, anemia, etc.

There is one other characteristic which completes the analogy between cancer and tuberculosis, and that is the hereditary predisposition to the disease. The observation may be added, however, that there is a noteworthy immunity to cancer in tuberculous families, and vice versa, although this relationship is not an absolute one. In examining the family history of 315 cases of pulmonary tuberculosis, I found that only 37 (about 10 percent) had a family history of cancer, while out of 505 cancer cases there were 110 (20 percent) with a tuberculous history. This incidence of tuberculous family histories in cancer cases, when compared with cancer histories in cancer cases (185 out of 425), offers a decided indication of a familial predisposition to cancer in cancerous individuals, as compared with the predisposition of tuberculous persons to cancer. It must not be overlooked that the highly infectious nature of tuberculosis can easily lead to false conclusions regarding the part inheritance plays.

The fact that tuberculosis has a tendency to result fatally at an early age, before

cancer usually becomes evident, is likely to lead to false conclusions concerning the association of the two diseases.

All of these observations are highly suggestive of a similar exciting cause in the two diseases, but still fail to offer positive proof that cancer is the result of infection and can be transmitted. While the postulates of Koch must still be compiled with to identify a microorganism as the causative agent for a given disease, it must be agreed that a disease can be accepted as the result of an infection if it has a contagious character, especially if the symptoms and course of the disease correspond to the behavior of the human organism toward infection. Thus, for example, while the true cause of infantile paralysis may still be disputed, long before Flexner's discovery it was recognized to be an infectious disease.

While cancer does not reveal any striking and obvious contagious properties, a close scrutiny of the facts indicates a much higher contagious character than superficial observation might suggest. The so-called "cancer houses" of New York City and Paris may or may not be of any significance, but the fact that conjugal cancer occurs more frequently than pulmonary tuberculosis in both husband and wife is of at least speculative interest, considering the established contagious nature of tuberculosis.

However, I have recently acquired some direct evidence which speaks very strongly for the contagious character of cancer.

In reviewing the family histories of 315 cases of pulmonary tuberculosis, it was observed that, while there was a greater tendency for tuberculous fathers to have tuberculous daughters than to have tuberculous sons (24 tuberculous fathers with tuberculous daughters and 9 tuberculous fathers with tuberculous sons) and, likewise, tuberculous mothers more frequently had tuberculous sons than tuberculous daughters, nevertheless, in spite of this sex determination of susceptibility, I found a much higher incidence of tuberculosis in the mothers of tuberculosis patients than in the fathers—44 to 33 to be precise, or one-third more. I felt that this was interesting confirmation of the theory that many adult cases of pulmonary tuberculosis are an activation of an early childhood infection. The greater morbidity of the disease in the offspring of tuberculous mothers than of tuberculous fathers would be naturally expected if the disease was contracted during infancy, because of the closer contact between the mother and child.

To convince myself that there was a relationship between the facts in the family history and the development of pulmonary tuberculosis in later life, I thought it would

be interesting to make a comparison with a similar study of cancer cases. I suspected that there might be some similarity, but to my astonishment, in spite of the same tendency for cancerous fathers to have cancerous daughters and cancerous mothers to have cancerous sons, the incidence of cancer in the offspring of cancerous mothers was more than twice as great.

Out of 505 cancer cases, I found 185 cases with a definite history of cancer in the family. In 80 cases no record of the family history could be obtained. One hundred thirty-three (133) of the remaining 425 had no tuberculosis nor cancer in the family history; 110 cancer cases had a tuberculous heredity. The discrepancy between the tuberculous heredity and the cancer heredity—110 to 185 respectively—while not impressive, indicates a certain degree of predisposition, in view of the extent of tuberculous infection in the general population and the fact that there is a much greater chance for parents with cancer predisposition to die from some other cause before the cancer makes itself apparent.

Of 133 positively diagnosed cases of cancer, with cancer in either one or both parents, we found the following distribution:

30 women with cancer had cancerous fathers

56 women with cancer had cancerous mothers

23 men with cancer had cancerous mothers

7 men with cancer had cancerous fathers

17 cancer cases had both cancerous fathers and mothers; 2 of these 17 were men.

There were 79 cancer patients whose mothers alone had cancer, but only 37 cancer patients whose fathers alone had cancer.

The fact that 30 women had cancerous fathers, against 23 men who had cancerous mothers, along with the opposite situation of 23 men with cancerous mothers and 7 with cancerous fathers, discourages the probability that this preponderance of cancer in the mothers over the fathers can be explained on the basis of a greater transmission of the predisposition through the mothers. It is evident that there is a much greater tendency for women than for men to have cancerous fathers, but in spite of this fact there were 71 out of 101 women who had a cancer "heredity" on the mother's side. Such a preponderance of cancerous mothers over cancerous fathers, especially among the women, who would on the basis of heredity show a greater incidence of cancerous fathers than in the case of men with cancer, requires an explanation even in an admittedly small series such as this.

It is a common observation that many recessive hereditary characteristics are transmitted from mother to son and from

father to daughter or may remain latent, so that the grandson will show the characteristic of the mother's father, and vice versa". This is invariably true of hemophilia; it has appeared to be operative in migraine; and we see it frequently in the correspondence of physiognomies and body stature.

The dominance of cancerous fathers among women, as compared to cancerous fathers among men (7 men out of 30 men with cancer had cancerous fathers) justifies the opinion that whatever predisposition is inherited follows this same law of latency in relation to the progeny's sex.

In spite of this demonstrated disposition of the daughters of cancerous fathers to be more likely to have cancer than the daughters of cancerous mothers we find more than twice as many men and women in this series had cancerous mothers as had cancerous fathers including 56 out of 86 women who had cancerous mothers.

So far as hereditary susceptibility is concerned, there is a close similarity between cancer and tuberculosis in the sexual determination of its recessive character. The known contagiousness of tuberculosis, and the fact that it can be carried for years in a more or less dormant condition, would lead us to anticipate that there would be more tuberculous patients with tuberculous mothers than those with tuberculous fathers. To find that this same situation is true of cancer, however, is somewhat startling and disconcerting to preconceived ideas of its noncontagious character.

Evidence is not lacking that cancer can be present in a dormant condition like tuberculosis and become active when conditions are favorable to it. I have seen in my own experience, for example, a case of a woman who had a breast amputated for a malignant neoplasm and there was no sign of recurrence until ten years later when a carcinoma of the lumbar spine developed and terminated fatally. A similar instance of recurrence has been reported as late as fourteen years after the original growth was removed, which in turn had been present for seven years before operation¹⁰.

I have observed a number of cases where a tumor became recognized and showed few characteristics of malignancy over a period of two or three or even four years, and then would suddenly develop rapidly and the general symptoms of cachexia, loss of weight, muscular atrophy, etc., would appear.

Cancer and tuberculosis may both show periods of remission, which can easily lead to false conclusions regarding the efficacy of various treatment measures.

This, however, is not the most important conclusion that this study suggests. Assum-

ing that the excess of cancerous mothers over cancerous fathers, in cancer cases, is accounted for by the fact that the disease is contracted through the mothers, then we are forced to accept one other characteristic of the disease and that is nothing else than that the organism or organisms responsible for it can, like syphilis and tuberculosis, lie dormant in the individual's tissues until the natural immunity, through age or other causes, becomes weakened and it produces the tumor formation and toxic symptoms of the disease. Attention has already been called to observations that cancer can lie dormant in this manner over a period of years without any tumor formation or other symptoms.

It appears to me that this is a question of tremendous moment. It means that the whole approach to the cancer problem has been wrong, that it must be studied from a chemologic, serologic, and bacteriologic standpoint in its incipency as a systemic infection, and not in the morphologic classification of the neoplastic characteristics of the end stages.

We know, of course, that cancer often occurs in those who do not give a family history of cancer. The mere fact, however, that the parents died of some other disease than cancer does not prove that such parents were free from the infection and might not have developed the disease in an active form had they had less resistance or had they lived longer. Nevertheless, we do know that a great many women with cancer are likely to have offspring with cancer. Here is a group in which active measures of prevention can be tested and in which a study of the so-called "precancerous stage" can be made.

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Nonspecific Infection and Cancer

By EMILIAN O. HOUDA, M.D., Tacoma, Wash.

SINCE CANCER is not a specific disease, as it would be if due to the introduction of some one and continuing factor, let us consider a few of the most important items of fact by which malignant growths are made possible, seeming exceptions notwithstanding. If these be credited (and they seem indisputable), a step forward in our thinking is made possible.

1.—There is no known substance, in or outside of the body, whose introduction into flesh could, by itself, cause cancer. Yet, paradoxical as it may seem, such a factor actually underlies the development of each malignant growth.

2.—Cancer never makes its appearance in healthy flesh.

3.—As an unavoidable corollary to the second item, cancer invariably makes its initial appearance within a very circumscribed area—no doubt of microscopic dimensions to start with—but always in a site that long had been the seat of a chronic affection of nonmalignant nature.

4.—Each of the antecedent affections, that seemingly are necessary to the development of malignant growths, will with difficulty be dissociated from an intrinsic irritation—and what disease is not of such origin? This is of far greater importance than extrinsic irritations of many different kinds (and therefore nonspecific), that intermittently add insult to tissue already diseased, or actually bruise cancer when well on the way. This inside irritation may well be due to the poisons generated by micro-organic life present within, acting over protracted periods of time, as is necessary to continue the courses of all chronic afflictions, and a somewhat longer time for malignancy to be assuredly ushered in. Assuredly, something apart from malignancy must act as its usher.

5.—The poisons of micro-organic life, which are most concentrated at the points of their generation, may account for the long-deferred development of malignant growths only in sites of chronic disease. Diffusible, and thereby perfused throughout the body, these poisons induce what is often recognized as the "constitutional phase" of malignancy. They are the "something" which, although requiring a long time to effect the changes peculiar to cancerous tissue, ushers in this affliction.

In view of these facts, there should remain no question as to the nonspecific nature of malignant disease. These same facts leave no doubt that malignancy must be a specific phase at least; one that cannot

be other than terminal. There are clear-cut analogies on this score. Locomotor ataxia and general paralysis of the insane are classic instances. Neither of these is a specific disease wholly apart to itself. Rather, both are terminal stages of syphilis, neither of which could have developed without many years of spirochetal infection.

Applied specifically to malignant goiter, this viewpoint suggests that malignancy, *per se*, is and will remain an imponderable phase in the life cycles of several generations of chronically sick thyroid cells. Of this phase we know about as little as we do of the earlier phases that eventually lead up to the development of malignancy. Yet, in conformity with the basic law of cause and effect, even this late phase must have had an underlying cause which antedates the appearance of cancer.

Between the entrance of primary causes and positive evidence of their effects, one must acknowledge the presence of what is a necessary period of incubation. Since the full story of every cancer dates back to incredibly simple affairs, this period may be narrowed down to an immediate threshold, which lies between the benignity of flesh already sick, and malignancy. If this be acknowledged (as it must be), sick cells have a very long trail to travel before they become malignant. When they finally arrive at this point, cancer is well on the way, be it ever so small.

So the one feature ever foreign to non-malignant cells, but clearly characteristic of cancer, lies in the singular and necessarily slow transition of once-normal cells into definitely malignant ones. But, like cancer itself, these transitions are matters peculiar to each afflicted individual, and are in no wise transferable to a cancer-free body.

What takes place beyond the undefinable thresholds necessary to cancer development is better known than the story of almost any other human wreckage. Most of it is already spread across the pages of medical literature; in museums, with their remarkable displays of preserved specimens, of which no two are alike; published volumes, with pictures of cancer in the gross, and with microphotographs that illustrate every known variety of growth in minute detail. Instructive as all these are, in the last analysis all that occurs, beyond thresholds, merely shows the profound manners in which malignant growths had deployed themselves in once-living flesh. Each specimen shows the mass effect of microscopic causes that had been at play within it, be-

fore and during its entire period of development in a body long since tending toward its grave.

Like a projector which throws a complete picture on the silver screen, the now-tangible factors account for all that is known about one form of cancer, and these are none other than the microbes which cause ordinary goiter. They are the root-facts now found in all stages of thyroid disease, including its last phase in malignant goiter.

When light is definitely spotted upon one form of cancer, as root-facts alone can do, it might be expected to shed light upon similar facts in other forms of malignant disease. This it does. As immediate controls of those present in malignant goiter, different forms of micro-organic life have been found in a variety of benign and malignant growths, thereby suggesting that some relationships actually exist between them and the growths in which they are present.

These relationships, with clear-cut analogies, outmode once-useful theories, but none can deny that nothing else can do the things which root-facts do, even though they ever fail to explain the imponderables about everything extant—for not all is known about anything!

If root-facts did not trickle good sense into the story of everything, all educational institutions could well be razed. However, such facts find their chief usefulness and educational value in furnishing a thread of continuity to the whole story of the subject with which they are concerned. In the present instance, to the whole story of thyroid enlargements. The continuity idea appears here for the specific purpose of touching upon a long-missing link, as well as an important factor in the development of conclusions worthy of serious attention.

In the instance of thyroid cancer, the insistence upon establishing continuity of thought is specifically stressed, and for one reason especially apart to itself. This regards a rather ancient pig-in-a-poke, "chronic irritation," which long has been "accepted" and "recognized" the world-over as the chief factor in cancer causation.

Really, in the clear light of root-facts, the time has come to question this idea. Until coupled with the idea of body-cells as the actual "seed" of malignant growths, this poke conveyed no idea as to why once-normal cells became mere seed for useless growths. What else, other than cells, could any flesh be composed of?

It is not strange that, singly or when combined in mass attack, theories got no farther than what a microscope enables man to visualize. Their self-evident limitations left too much to be surmised. Yet, in almost every instance, the precision instrument has revealed the underlying causes of settled diseases. It also visualizes the minute entities present in cancer and its precancerous conditions, whose previous intangibility was the chief reason for the invention of many theories.

With such facts in hand, all that remains regards their actual relationships to the conditions in which they are present. Are these relationships basic, incidental, or far-distant? Since they are here viewed as basic, there is one apparent paradox which needs clarification. This regards their basic rôles in both cancer and precancerous conditions, though not the actual seed of either benign or malignant growths.

Through rather simple analogies this paradox is explained. As the virus of hydrophobia, which as yet remains intangible, makes mad dogs of house pets in a very few days; and the virus of syphilis makes men mad after a variable period of several years of untreated spirochetal infection; so, although requiring a long time to effect the changes peculiar only to cancerous flesh, other forms of microorganic poisons can make "wild" body cells out of "tame" ones.

The conclusion now reached in regard to one form of cancer is this: Malignant goiter, with the necessary element of time in long-standing thyroid disease, is due ultimately to the progressively degenerative direction in which chronically sick thyroid flesh reacts, as it always does to the poisons generated by microbes now proved to be present in all stages of goiter.

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OBSTACLES TO LEARNING

There are four chief obstacles in grasping truth, which hinder every man, however learned, and scarcely allow any one to win a clear title to learning: namely, submission to faulty and unworthy authority; influence of custom; popular prejudice, and concealment of our own ignorance, accompanied by an ostentatious display of our knowledge.—ROGER BACON (1214-1292 A.D.)

The Treatment of Alcoholic Emergencies

By ANDREW J. McGEE, M. D., Dwight, Ill.

SINCE the repeal of prohibition the problem of acute and chronic alcoholism is more and more frequently presenting itself to the general practitioner of medicine. To these men, with their diversity of interests, there is still a great lack of knowledge respecting the action of alcohol on the human economy, and a lack of appreciation for the reasons of excessive indulgence. In a like manner there is a great diversity of opinion (based in some instances on actual ignorance) concerning the management of the acute crises which present themselves in acute and chronic alcoholism. This ignorance is no fault of the physicians, but is rather the fault of those who are in a position to disseminate knowledge acquired through the handling of thousands of cases of alcoholism. I speak of those men who are on the medical staffs of institutions devoted to the care and treatment of the addictions.

Alcoholism, it is generally conceded, is best treated in a special institution devoting its entire facilities to the care and management of the addictions¹. However, it is the general practitioner, or family doctor, to whom the patient first applies for help and treatment, almost always during an acute alcoholic crisis of some sort or other. It is at this time that an accurate knowledge of the methods preferable in handling such cases will be most helpful.

The first and most important factor in the successful management of the case at this time is a thorough knowledge of the pharmacology of alcohol and the physiology of alcoholism. The second important point to be considered is a better understanding of the psychic aspects in the etiology of the addictions.

It has previously been shown that alcohol has a selective action upon the central nervous system, beginning at the highest levels and gradually working downwards². Its action is always a narcotic one, the apparent stimulation being due to the narcotization of higher levels of control, with the subsequent release of lower-level impulses. Thus the first effect of alcohol may be said to be a suppression of those reactions which were the last, phylogenetically speaking, to develop. These reactions include the social and sexual inhibitions, in which the sense of judgment and fear of consequences are greatly dulled or blocked out all together. With increasingly larger doses, the centers of vision, speech, hearing, equilibrium, and locomotion are next affected, followed by a narcotization of the vital centers, the degree

depending on the individual tolerance of the patient and the dose of the drug.

The physician called to see an alcoholic emergency must, before instituting any treatment, decide into which of the following categories his patient falls:

- 1.—Simple acute alcoholic intoxication.
- 2.—Acute alcoholic intoxication superimposed upon a chronic alcoholic state.
- 3.—Emergencies arising from chronic alcoholism, including:
 - A. Delirium tremens.
 - B. Other alcoholic psychoses.

After a determination of the exact nature of the case under consideration, the next step is the institution of adequate treatment to overcome the immediate crisis, followed by rational follow-up therapy designed as prophylaxis against a recurrence of the crisis. The follow-up therapy depends chiefly on future complete abstinence from all alcoholic beverages and, in spite of the simplicity of this therapeutic maxim, it is the most difficult part of the treatment for the general practitioner to execute. It is here that a knowledge of the psychic factors leading to chronic alcoholism are most important.

In order to present a better understanding of the entire picture I shall consider each of the topics mentioned in some detail, followed by a discussion of the mental or psychic factors involved in alcoholism.

Acute Alcoholic Intoxication

The condition of acute alcoholic intoxication may be said to be present in a person who has taken alcohol in sufficient quantities to poison the central nervous system, producing a temporary disorder of the faculties so as to render him unable to execute the occupation in which he was engaged at the time, thereby causing danger to himself or to others³.

The degree of intoxication will depend directly upon the concentration of alcohol present in the blood. From 0.2 to 0.5 percent will result in definite drunkenness, and when it reaches a concentration higher than 0.5 percent there is imminent danger of death⁴. When the physician is called the patient is usually in a stupor, from which he can be aroused only with difficulty. The breathing will be slow and stertorous, the pulse extremely rapid, and the entire body will usually be covered with a cold, clammy perspiration. The face is pale and the pupils will often be dilated. The reaction of the pupils to light changes, and the

patellar reflexes, will be found to be sluggish or abolished altogether".

In spite of the frequent occurrences of such conditions, commonly spoken of as being "paralyzed drunk," it is a mistake to do nothing other than let the patient "sleep it off." All physiologic functions are at a low ebb, and if there is still sufficient unabsorbed alcohol in the stomach to materially increase the blood concentration, there is immediate danger of death. Mellenby has shown that the maximum concentration of alcohol in the blood may not occur until two hours after ingestion⁴. It is therefore essential that immediate steps be taken to relieve the toxicosis.

The treatment here, as in any other acute poisoning, centers around three therapeutic dogmas: First, to remove, if possible, any unabsorbed poison; second, to administer a chemical or physiologic antidote or both; and third, to institute what supportive measures are necessary to counteract the physiologic effects of the poisoning agent.

The first procedure is best accomplished by the use of the stomach tube, followed by copious lavage with a weak alkaline solution (one teaspoonful of sodium bicarbonate to one pint of water). The alkaline solution is advised because of the tendency toward acidosis from alcoholic excess⁵. Apomorphine has been recommended by some, but because of the after depression of the drug it is not so desirable as the stomach tube.

The physiologic antidotes which may be given are: strychnine sulphate, 1/30 grain (0.5 mg.), or camphor in oil, 1.0 to 2.0 cc., given intramuscularly and repeated if necessary; or one dose of atropine sulphate, 1/40 grain (0.66 mg.), may be given. Caffeine-sodium benzoate has been recommended, but I do not consider it advisable if coma has appeared. External heat should be applied and the limbs briskly massaged, to counteract the circulatory depression. Recovery following the acute and sometimes terrifying symptoms will usually be rapid, due to the rapidity with which alcohol is oxidized in the system.

Following the acute symptoms, the frequent severe headaches may be treated with relatively large doses of the coal tar derivatives, phenacetin or amidopyrine. Morphine, codeine, or other opium derivatives are *absolutely contraindicated* in any stage of acute alcoholic intoxication, and the barbituric acid preparations should be used with extreme caution. Alcoholics, in general, are poor subjects for the use of morphine, simply because a person subject to alcoholic excesses is usually a likely candidate for the acquisition of other habits suggested by the relief obtained when the "needle" is applied.

Acute Alcoholic Intoxication Superimposed Upon a Chronic Alcoholic State

This is a condition which occurs when a person who habitually uses a given daily quantity of alcohol ingests enough more in a short period of time to result in a definite physiologic crisis. Men who are accustomed to the use of alcohol absorb it much more slowly than do those who use it only occasionally⁶. For this reason it takes a larger quantity to produce acute symptoms. The danger, however, lies in the amount of alcohol present in the blood stream, and for this reason an acute crisis in an habitual drunkard is just as serious and requires as energetic treatment as in one who is not accustomed to its use. In addition, the recuperative powers of such an individual are not so good, because of the organic changes already present, due to the continual alcoholic saturation of the heart, lungs, liver, kidneys, and other organs. These changes consist chiefly of fatty infiltration of the parenchymatous organs, with some cellular degeneration and a subsequent replacement with connective tissue. The blood vessels, especially the capillaries, show changes due to prolonged dilatation. Diagnosis of this condition is easily made on the history, which is not hard to obtain.

The immediate treatment is the same as that in simple acute alcoholic intoxication. Following the immediate treatment just described, it is important that elimination be promoted as rapidly as possible and that the patient be given nourishment as soon as is feasible. Promotion of elimination can be secured in many ways. I have found that calomel gives better results than other cathartics. Two compound cathartic pills may be given, followed in six or eight hours by an ounce of a saturated solution of magnesium sulphate.

The question of whether to withdraw all alcohol immediately, or to taper it off gradually, is subject to considerable discussion. The important consideration is that it be taken away, and if this is accomplished within a reasonable time there certainly can be no harm in a gradual reduction, if for no other reason than the psychologic benefit it has on the patient. The method which I have found very successful is to continue the whiskey in 1-ounce doses, given in a glass of hot water to which a heaping teaspoonful of malted milk has been added. The total amount of whiskey given will vary in individual cases. The average case will require about twelve ounces the first day, two or three ounces less the second day, and a similar reduction the third. By the end of the fourth day the patient should be able to get along without further alcoholic aid. I feel that gradual withdrawal is preferable, because of the danger of delirium tremens

or an alcoholic psychosis occurring after sudden withdrawal.

During the withdrawal period it is essential that the patient be placed in charge of a competent nurse. The nurse must be absolutely trustworthy and must be impressed with the necessity of following all orders diligently, regardless of any pleadings or exhortations on the part of the patient. It is during this period that the patient is apt to exhibit severe and sometimes alarming nervous symptoms, characterized by an exaggerated muscular tremor, weakness, and pain in the extremities, with nausea and vomiting. For the former symptoms, bromides, in 15- to 30-grain (1.0 to 2.0 Gm.) doses may be given, and for the latter only hot liquids should be given. The hot malted milk is advised because of its apparent ability to soothe the inflamed gastric mucosa, because the fat content delays the absorption of the alcohol², and because it supplies a readily assimilable form of food.

One of the chief complaints of patients during the withdrawal period is the inability to sleep. If the patient can be put to sleep during this period he will be a great deal more cooperative, because of the confidence it gives him. For this purpose Trional has been found to be satisfactory. Barbituric acid derivatives may be used if preferred. They should be given in sufficient doses to accomplish their purpose, but the dose should be reduced each night; and after the whiskey has been completely withdrawn soporifics should not be given.

Delirium Tremens

The exact cause of delirium tremens in alcoholics is not known. It seems to appear more frequently in individuals whose general resistance has been lowered by a prolonged period of intoxication, by the sudden withdrawal of alcohol, lack of food, overexertion, or any unusual physical or psychic shock. The condition may come on suddenly, or there may be several hours of prodromal symptoms, characterized by increased nervousness, tremor, and insomnia. The condition itself is characterized by visual hallucinations, during which the patient sees all sorts of repellent animals, such as snakes, rats, etc. Occasionally auditory hallucinations will also be present, along with various forms of paresthesias. Sometimes there is an occupational delirium, during which the patient goes through motions relating to his occupation¹⁴.

Treatment, according to Piker and Cohn, should be directed along the following lines¹⁵:

- 1.—The safeguarding of the patient against injury to himself and others.
- 2.—The prevention of exhaustion.

- 3.—The promotion of elimination, both gastro-enteric and urinary.

These authors have outlined a very satisfactory method for accomplishing these results in institutional treatment. However, the treatment in the home will necessarily have to be somewhat different, because of the lack of hospital facilities.

The first and most important element in attempting to accomplish anything at all in the home is the constant presence of a husky male nurse. In some cases, where the patient is extremely active, it may be necessary to have two nurses in attendance. The nurse must be instructed to be on constant guard to prevent the patient from harming himself. At the same time it is necessary that as little physical restraint as possible be used. Exhaustion is one of the principal causes of death in delirium tremens and is one of the chief conditions to guard against. A delirious patient who is forced to struggle against restraining shackles is very likely to die of myocardial failure. In order to strengthen the myocardium, Piker and Cohn have recommended digitalization of the patient. Regardless of the argument that digitalis is ineffective in its action on a toxically weakened heart muscle, the low mortality rate quoted by these authors, and my own results, seem to justify its use.

The question of sedation in delirium tremens is an important one. If the patient can be given enough sedation to produce physiologic rest, the danger of exhaustion is greatly lessened, providing the agent used is not more dangerous in its toxic effects than the resultant exhaustion without it would be. If the delirium follows a prolonged alcoholic debauch, it should be borne in mind that the system is already under the effects of a depressant, so it is essential that a sedative with a large margin of safety be chosen. It must also have a comparatively rapid action and should be eliminated or utilized fairly rapidly. In spite of the almost empiric use of paraldehyde, I have had much better results with pentobarbital-sodium (Nembutal), and experimental evidence seems to indicate that it much better fulfills the requirements^{16,17}.

In 1930, Nembutal (pentobarbital-sodium—Abbott) was examined pharmacologically by Professor Tatum, of the University of Wisconsin. His report, as well as others published since, shows that the drug's action commences within from fifteen to thirty minutes following its administration. Evidence further indicates that it is not excreted, but rather is rapidly destroyed by the liver. As to the margin of safety, it has been shown, by animal experimentation, that the minimum effective dose is 35 percent of the minimum lethal dose, while with

barbital the minimum effective dose is 75 percent of the minimum lethal dose.

The doses to be given depend upon the size and the general physical condition of the patient. In the average case, $4\frac{1}{2}$ grains (0.3 Gm.) may be given as the initial dose. This is equivalent in action to about 2 drams (8 cc.) of paraldehyde. Usually, following the administration of this amount, the patient will lapse into a light sleep, which will last from four to ten hours. Often, upon awakening, all signs of delirium will be gone and the sensorium will be clear.

Chloral hydrate should not be given, because of its action on the heart. Morphine is contraindicated, because of its ability to raise the intracranial pressure. Another drug which has been recommended by Sperber¹⁴ is Sodium Evipal, but its general use will have to await the results of further clinical trial.

The early promotion of bowel elimination is very important. Here again it is necessary to employ a drug which is rapid in action, is relatively non-toxic in the amounts required, and does not have undesirable side actions. A saturated solution of magnesium sulphate, given in one or two ounce doses, has proved very satisfactory. The copious watery stools which it produces apparently have a beneficial effect in reducing intracranial pressure.

The rise in intracranial pressure in delirium tremens has been clinically proved, and it is good therapeutics to institute measures to reduce it. Spinal drainage is the most logical method for accomplishing this, but it is a surgical procedure which should never be attempted in the home unless the same aseptic conditions which obtain in the hospital can be duplicated. Another procedure which has a beneficial effect in reducing the pressure of the intracranial fluid is the intravenous administration of a hypertonic dextrose solution. This can be accomplished satisfactorily in the home, providing the patient is not too actively delirious.

The prolonged and continued use of alcohol causes definite physiologic and pathologic changes in the body¹⁵. In delirium tremens we are dealing with an organism which has adapted itself to a constant alcoholic saturation. To remove the alcohol from the system suddenly is bound to result in a degree of shock directly commensurate with the amount of adaptation or addiction which has developed. It is well known that the human nervous system will better adapt itself to a gradual physiologic change than to a sudden one. An illustration of this fact may be seen in the shock sustained following sudden decompression of a chronically distended bladder. For this reason the logical treatment here is to continue alcohol

in constantly decreasing amounts, in order to give the body time to become adjusted to the physiologic change. The method for giving the alcohol is similar to that outlined above. By administering it in hot malted milk, the patient is also supplied with a certain amount of needed nourishment.

As soon as possible, it is essential that the patient be persuaded to eat. The diet should be a high-caloric, soft diet, with adequate amounts of vitamin B₁. Fluids should be given in sufficient amounts to satisfy the patient's desires. For the first few days cold fluids and foods should be withheld.

The treatment of delirium tremens in the home may be summarized as follows:

- 1.—Constant supervision by one or two nurses, with as little physical restraint as possible.
- 2.—Digitalization of the patient, to assist a weakened myocardium.
- 3.—Immediate and adequate sedation with a drug low in toxicity and with a large margin of safety.
- 4.—Early promotion of bowel elimination.
- 5.—The institution of measures to reduce intracranial pressure.
- 6.—A gradual reduction of alcohol.
- 7.—A high-caloric diet, supplemented with vitamin B₁.

Other Alcoholic Psychoses

For the purpose of this discussion, the other alcoholic psychoses may be grouped together. These conditions include Korsakoff's syndrome, acute alcoholic hallucinosis, and alcoholic deterioration. These conditions are not so apt to result in sudden acute crises as those already discussed, but because their appearance is sometimes abrupt and the symptoms somewhat alarming, it is well to have the characteristic features of each type in mind.

Korsakoff's syndrome is characterized by amnesia, disorientation as to time and place, falsification of memory, and the presence of peripheral neuritis. Delirium may or may not have preceded the attack. The most important step in the treatment is the discontinuance of alcohol. Here again it is better to take two or three days to taper it off than to stop its use abruptly. The peripheral neuritis, in this and other alcoholic conditions, is known to be due to lack of vitamin B₁ in the diet^{16,17}. For this reason it is advisable to give large quantities of this substance in the diet. At first the diet may be supplemented by giving a preparation of the vitamin hypodermically. Most cases usually clear up in a few weeks, with apparent complete restoration of the mentality. Occasionally the condition will

merge into a permanent alcoholic deterioration.

Acute alcoholic hallucinosis develops after prolonged and excessive use of alcohol. The sensorium is usually clear and the hallucinations are of the auditory type, often accusatory or threatening in nature. The condition is usually accompanied by extreme fear. The patient continues to be oriented as to time and place, and after recovery there is no amnesia. The hallucinations are real to the patient, and he may appeal to the police for protection, or he may, in terror, attempt to take his own life. For this reason the treatment, in addition to removing the alcohol from the patient, should embrace constant watchfulness to prevent self harm. Recovery is usually fairly rapid, occurring in a few days.

Persons who consume large quantities of alcohol over a long period of time will, in most cases, if they have not already developed any of the psychoses so far described, develop a disintegration of personality. Pathologically, this is characterized by a progressive, chronic degeneration of the paraneuronal nervous structures. Clinically, the condition is distinguished by a progressive loss of memory, diminution of judgment, a tendency toward deception and falsification, and a loss of ambition. This condition, when associated with arteriosclerosis, will often result in a profound dementia. The treatment here is of less avail than in any of the other conditions. However, it is necessary to remove the alcohol as soon as possible. In these cases it is almost impossible to obtain any cooperation from the patient, and it becomes necessary to guard him constantly to prevent his return to alcohol. Psychotherapy is impossible, because of the irremediable dementia which is present.

Psychologic Considerations

A proper understanding of the psychology of the chronic alcoholic can only be appreciated if the physician will cease to regard the condition as a vice and will, instead, think of it in terms of a complex psychologic disease. It is true the pathologic changes present in the alcoholic patient are the results of a self-induced and often premeditated ingestion of a toxic substance. But it is the duty of the physician, if he intends to do more than treat the patient during his immediate emergency, to understand a few of the factors which are responsible for the production of such a condition.

Many years ago, MacCurdy stated: "The alcoholist is, before he even touches a drop, an abnormal person." Upon superficial examination there appear to be many different causes for alcoholism and many different types of alcoholics; but from a

psychologic standpoint, with a very few exceptions, the basic etiologic urge is the same. From a social standpoint there are two types of alcoholics, the convivial drinker and the lone drinker. The motivation behind each type is the same. The true alcoholic is a hypersensitive individual who is extremely conscious of his own inadequacies. From experience he has found that alcohol makes it possible for him to overcome shyness, to dispel boredom, and to blunt his inhibitory impulses. It is a form of escape mechanism, providing a convenient and efficient cloak with which to cover an exaggerated sense of inferiority.

The situations from which the person is escaping may be real or imaginary; that is, actual business or domestic difficulties may be present, or the conflict may be the result of the person's own mental mechanism. Worries from which there seems no escape produce a sense of inadequacy which requires a mental solution. The normal individual will face his problems and decide on a course of action which will result in a satisfactory solution. The man who has just suffered a great tragedy will find the solution to his problem in religion, intensive work, or mental resignation to his fate. The man who is faced with debts he knows he cannot pay will consider all possible solutions and follow the course which seems to offer the least amount of difficulty to him. The alcoholic, in the same situation, will be confronted with a mental conflict which has but one solution, and that is alcohol. After the effects of the alcohol have disappeared the original conflict still remains and is still a justifiable cause for taking more alcohol. These factors apply equally to the convivial drinker and the lone drinker, the difference being that the lone drinker, because of conditioning through environmental education, is ashamed to participate in open indulgence.

The man who uses alcohol in order to commit discreditable acts which would be impossible were he sober, and the man who uses it for the sexual stimulation which it provides, are both motivated by the same psychologic mechanism. They are escaping from their inhibitions, or, as Freud would say, from their "censor mechanisms." James very aptly stated it as follows: "Sobriety diminishes, discriminates, and says 'no'; drunkenness expands, unites, and says 'yes'."

No matter what the professed reason for indulgence may be, actual analyses of thousands of cases lead one to the inevitable conclusion that the majority of individuals meet life's difficulties, fancied or real, by the use of strategy and skill, while the alcoholic seeks effortless escape in alcohol. All human beings need and crave rest and relax-

ation. To a small percentage, the stresses and strains of modern life present too great an obstacle to be hurdled by ordinary mental mechanisms and the effortless relaxation secured by alcohol produces a substitute mental recuperation, which temporarily satisfies both the physiologic and the psychologic need.

The chronic, excessive user of alcohol can never be transformed into a moderate drinker. For him, after alcohol has once been removed, the only future course is total abstinence. It is often difficult to make him appreciate and understand this, but it is absolutely necessary if any permanent results are to be obtained. It is for this phase of the treatment, the psychic re-education of the patient, that institutional treatment is almost a necessity. The general practitioner usually has neither the time nor the desire to manage it.

The first essential in handling this phase of the treatment is a cooperative patient. If he is not at first cooperative, then the subject must be presented to him in a way that will make him actually desire, above all other things, to give up the use of alcohol. If he can be shown that his condition is due primarily to a complex individualistic psycho-physiologic synthesis in his own make-up, he will be able to understand the rationale of future total abstinence. In other words, he must be made to understand that the only way he can avoid the dangers of excessive alcoholic indulgence is to avoid any and all alcoholic beverages in the future. If this fact can be sufficiently emphasized and if the patient does desire to recover and remain well, he will do so after the physical effects of the use of alcohol have been corrected and he is relieved of his craving for the drug.

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IDEALS AND COURAGE

Mere ideals are the cheapest things in life. Everybody has them in some shape or other, personal or general, sound or mistaken, low or high. But the more ideals a man has, the more contemptible is he, if the matter ends there, and if there is no courage shown, no privations undergone, no scars contracted in the attempt to get them realized.—WILLIAM JAMES.

SCIENCE AND RELIGION

Science and religion are the two pillars of the portal through which the human soul enters into the world where divinity resides.—DR. MICHAEL PUPIN.

We want a new reformation. It will be neither fundamentalist nor modernist, but will rest upon mysticism, which is the practice of the Presence of God, and upon rationalism, which means confidence in science.—DEAN INGE.

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Colon Irrigations: Objectives and Technic

By JAMES W. WILTSIE, M.D., Binghamton, N. Y.

SINCE colon irrigations are commonly supposed to be of value more as a means of relief from distressing symptoms caused by fecal accumulations and gas than as a therapeutic measure of distinct virtue, with definite indications and contraindications, it might be worth while to examine this agency from the latter point of view.

To begin with, we will recognize the fact that the promiscuous use of irrigations has received much unsavory notice, because of the activities of exploiting charlatans. This, naturally, is to be deplored. We cannot, however, accept this fact as a legitimate reason for blanket condemnation of the scientific use of this agency when actually indicated. Indeed, ethical members of the profession themselves are not entirely immune from criticism when they purchase equipment under the pressure of salesmanship, and then attempt to learn in what conditions and how to use it. This is placing the cart before the horse. Therefore, instead of placing ourselves in the ridiculous position of trying to fit a disease to a machine, it would be more logical to first feel a need and then search for or develop a therapeutic regime to meet it.

A number of years ago I felt such a need to combat systemic toxemia and, through the process of trial and error, evolution and logic, ultimately developed a system of

therapy which, in my hands, has proved superior to anything previously tried.

Briefly, my first objects of attack in chronic toxemias were foci of infection in the teeth and tonsils. When extirpation of the diseased tissues failed to correct the condition in a large percentage of these cases, I tried elimination and systemic alkalization. This helped, for the time being, but recurrence of symptoms was the rule. Next followed an attempt to increase the resistance of the patient through specific and nonspecific vaccines. I also experimented with parenteral injections of proteoses, milk preparations, and finally with sodium iodide intravenously. A record of these studies may be found in the literature.

To make a long story short, I found that, through the use of sodium iodide intravenously, I obtained focal reactions in cases of foci of infection that had been overlooked, also an increase in the leukocyte count and a general reaction. In some cases a course of six or eight injections resulted in decided benefit to the patient. This diagnostic and therapeutic discovery was a distinct advance. Yet, when all newly found foci were removed or drained, many patients continued to show evidence of a systemic toxemia. Prominent among the symptoms of this residual group were constipation, coated tongue, foul breath, eructations of gas, loss

of appetite, mental depression, loss of weight, dizziness, and a muddy complexion. It then occurred to me that the colon was the only uninvestigated area, and the reason for the failure of sodium iodide to direct attention to it was that, since infection there was within the lumen and not in the tissues of the colon itself, focal reaction to parenteral therapy could not be expected.

Effort was now directed to the eradication of colon infection through the use of various types of purges, intestinal antiseptics, oils, powders, and enemas, with but slight or short-lived results. It was then that the need for some new method of attack became sufficiently pressing to cause me to examine the claims of several systems of colonic irrigation. After selecting what seemed to me the most rational system, I used it upon those patients who had been uninfluenced by the use of sodium iodide. To my complete satisfaction, every patient showed immediate improvement. Some went on to complete relief and cure. A few required further study, but remained permanently improved.

However simple and logical the above narration causes this system of therapy to appear, it is by no means so simple in actual practice. There are many problems for consideration and many difficulties to be overcome. For example, there is the problem of how and when to handle the primary and secondary foci; the problem of establishing a lasting immunity by specific desensitization; the search for and correction of predisposing causes; the acquiring of a satisfactory technic in the giving of irrigations. Finally, there is the follow-up management, with special attention to diet, habits, regulation of the bowel, medication, etc.

Principles of Technic

Disregarding the majority of these problems, I shall, in this article, discuss certain phases of technic, since it is here that there seems to be so much confusion and difference of opinion.

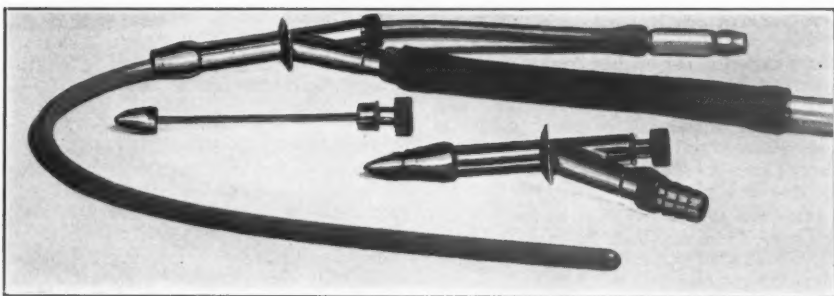
Let us first make a distinction between enemas and irrigations, high and low. Bastedo's differentiation between an enema and an irrigation, on the basis of purpose, is perhaps as satisfactory as any: He says: "In medicine, the term irrigation conveys the idea of washing; therefore, while the ordinary enema is given with the purpose of inducing defecation, the irrigation is administered, not to induce defecation, but to wash out material situated above the defecation area and to lavage the wall of the bowel as high as the water can be made to reach." In the administration of an enema the solution should not be permitted to pass beyond the splenic flexure, since the portion that does is rarely returned. Prop-

erly given, therefore, an enema should always be "low," administered with the patient sitting on the toilet, or in a semi-reclining position in bed. No more than a quart of solution, at most, should be given at a time. Irrigations, on the other hand, when properly given, are always "high"; i.e., the proximal colon should be reached and lavaged.

Although there are many technics and many makes of apparatus offered for the "proper" giving of irrigations, a study of these methods and appliances indicates but two basic conceptions of principle involved and but two methods of approach. The four possible combinations of these embrace all methods, with their variations, refinements, and specialized accessories. The physician specializing in colonic therapy should be acquainted with all technics, the conceptions of colon physiology upon which they are based, when one or another is to be preferred, and what each may be expected to accomplish. For, when all is said and done, it is the technician himself that really counts. A well-trained technician or a physician of experience in colonic therapy is able, with any apparatus, with but slight adjustments, to accomplish any purpose in technic he desires.

The two fundamental principles involved are based upon two different mechanisms of the colon in its transportation of material. The first principle involves emptying the colon from above down, the impulse originating in the cecum or proximal colon. In this the entire colon acts as a unit. The second principle involves the defecation mechanism only, at first emptying the colon from below up by repeated small injections, until the distal colon is completely empty, and then proceeding to fill and empty the proximal colon. The two methods of approach are the rectal applicator and the long tube. The method described by Bastedo employs the rectal applicator, as applied to the first principle. The Schellberg technic is the only true adaptation of the long tube to the first principle. The Borocini technic combines the rectal applicator with the second principle; whereas the Vattenborg method best represents the use of the long tube as applied to the second principle.

In general, any method of irrigating the colon, to be acceptable, must satisfy certain conditions. In the hands of an average technician using ordinary care, it should be reasonably foolproof against accident or injury to the patient. Solutions should be introduced slowly, never under gravity pressure greater than two and a half feet elevation and never in quantities sufficient to overdistend the bowel. The temperature of solutions should be known accurately at all times, so that the limits of physiologic



Courtesy, Paul E. Johnson, Mfrs.

Fig. 1:—The speculum, with obturator and outflow adapter in place, is shown at the lower right; above, the obturator has been withdrawn and the inflow adapter and tubing and the outflow tubing are in place.

tolerance be not overstepped. The duration of treatments should not be over half an hour, as a rule. Exceptionally, a little more time may be required. The method should insure the filling and final emptying of the cecum. Large quantities of fluid should not be used—rarely more than three gallons. There should be a minimum of manipulation, either external or internal. The patient should be relaxed at all times, and should be permitted to lie down for a few minutes following the irrigation. There should be provision against fouling or contaminating the permanent equipment. Parts coming in contact with the patient or the return flow should be steam sterilized following every treatment. Colon tubes should be either boiled or thoroughly washed and scrubbed and placed in some disinfectant over night.

Apparatus and Specific Technic

The apparatus which I shall describe embodies the essential features of several well-known and efficient units. The technic described is that I should use with such a unit, with variations depending upon my objective and the individual under treatment.

The equipment consists of one three-gallon glass jar and two two-quart jars, fixed on an adjustable metal frame which, in turn, is supported by a substantial movable metal base. Rubber tubing from each jar is led to a single inflow tube which, in turn, is attached to a rectal tube. There are separate clamps on the tubing from each jar, for control of the flow of the several solutions. Into the line from the large jar is inserted a device for estimating the rate of flow of the solution from this jar to the colon. It is sufficiently sensitive to indicate slight changes in intracolonic pressure. Through its use a technician is soon able to appreciate many things that are taking place inside the colon.

A specially designed rectal speculum (Fig. 1) is a feature of this apparatus. The main

shaft of the speculum is about 5 inches long, $\frac{5}{8}$ of an inch in diameter, and carries an obturator. There is a narrow flange 3 inches from the proximal end, to prevent introduction of the speculum too far, and also to assist in holding it in position. Proximal to this, $1\frac{1}{2}$ inches from the flange, is a slight bulge in the shaft, to prevent it from slipping out of the rectum. In the distal end of the shaft, set at an angle of about 45 degrees, is a short metal tube of the same caliber as the shaft, to which is attached a large tube for the conveyance of the effluent discharges to a receptacle at the base of the frame.

After introducing the speculum into the rectum the obturator is withdrawn, and a metal adapter, with an opening just large enough to receive a No. 28 French colon tube, is slipped into place. At a distance of a foot or so from the patient, both the inflow and outflow tubes pass through the main control mechanism. This mechanism has a lever for opening and closing each tube separately. It is upon the proper manipulation of these levers and of the colon tube that a good technic depends.

Preparatory to irrigation the patient should empty the bladder. The rectum and pelvic colon should also be empty. If they are not, a small enema should be given preliminary to introducing the speculum. After disrobing, the patient should lie on the colon table or bed, on his left side, with both knees flexed. The operator should then lubricate the anus with petrolatum or lubricating jelly and introduce his forefinger well into the rectum. By so doing, folds of mucous membrane, rectal tabs and hemorrhoids are smoothed out and pushed aside. The direction of the anal canal is determined and fecal masses or other possible obstructions discovered. The speculum is then inserted, the obturator withdrawn, and a connection made with the outflow tube. Air is expelled from the inflow line and colon tube by opening all valves from the

large tank, which is filled with tap water at body temperature. The colon tube is then clamped a few inches from the tip by a sponge holder, lubricated, and inserted through the adapter of the speculum and on into the rectum. The sponge holder is now released and a few ounces of water allowed to enter the rectum, when the main inflow lever is closed and the outflow opened.

After one or two flushings to remove gas and small fecal residues, the tube is gently advanced, with water running, until it enters the rectosigmoid sphincter. This may require a little manipulation. It may be found that the tip of the tube will pass this point more easily while the solution is running out, since at this time there is a tendency for contracting muscles to relax. Then, with solution again entering the colon, the tube may be gently advanced. However, force should never be used. At the first indication of resistance, the advance should be stopped and the valves reversed. At this point the patient should be instructed to turn on his back. Again a few ounces of water should be allowed to enter the colon and another attempt made to advance the tube. If difficulty occurs the valves should again be reversed. Should there be no return flow it indicates that the solution is being held above the sphincter of O'Beirne. Since it is frequently found that a collection of gas occurs in this loop of the pelvic colon, causing distress and interfering with the passage of the tube, it would be well to disconnect the colon tube for an instant, to allow the escape of this gas and whatever solution has not passed on higher into the colon. This maneuver will relax the loop and permit the tube to be passed farther into the colon. The tube should then be reconnected and the irrigation continued. At least one model of this type of apparatus is equipped with a shunt from the inflow line to the outflow, separately controlled. Such provision obviates disconnecting the colon tube as just described. When the tube has reached a point where further advance seems contraindicated, it should be allowed to rest there quietly during the remainder of the treatment.

Through the process of letting a few ounces of water gently enter the colon, reversing the valves, then repeating the procedure several times, it will be observed that the colon is gradually being filled. When it is estimated that there are about three pints of solution in the colon, the valves should be reversed and left there while gentle pressure over the cecum and ascending colon is made with the left hand, rhythmically, first making slight pressure, then releasing. In a very few minutes it will be observed that a contraction occurs. Manipulation should then cease until ex-

pulsion takes place. Frequently the entire contents of the proximal colon will be transferred to the distal colon and discharged through the outflow tube. The colon tube is generally forced down into the rectum during this process, and should be withdrawn, as it now becomes a hindrance to evacuation. It can again be introduced as soon as activity ceases and irrigation repeated from the rectum, since it may be found difficult to pass it again into the pelvic colon.

As soon as the rectal discharges become moderately clear, the bowel should be permitted to rest for a few minutes and then the solution from one of the smaller jars allowed to flow in. If the tip of the colon tube can be advanced into the pelvic colon just before this is done, there will be less distress to the patient and a greater likelihood of getting the entire contents of the small jar into the colon before expulsive efforts are aroused. Should an expulsive effort occur at this time, the flow should cease momentarily and the solution be retained by the patient until spasm ceases, when the balance of the solution can be introduced. Following such a spasm, relaxation of the entire colon occurs and the solution will reach the proximal colon, as far as to the cecum. At this point the tube and speculum are withdrawn and the patient is permitted to go to the toilet.

This, with necessary variations, comprises the technic of the irrigation. It should rarely require more than half an hour and should not consume more than two gallons of water from the large jar. Further irrigating or manipulation will add nothing to the treatment and will only exhaust the patient. Such a treatment may be repeated daily for a week without harm. However, patients differ in their reactions and must be watched for indications of nervous exhaustion. Occasionally a patient will be found who cannot tolerate a treatment more frequently than twice a week.

The solution in the small jar is medicated according to the indications or purpose of the operator. Since these irrigations are essentially treatments to the mucosa of the colon, following out some definite preconceived plan of treatment, they are given in series, and cannot be looked upon as disconnected, purposeless cleansings. The temperature of the medicated solution should be as high as the patient can comfortably tolerate, and yet not transgress any physiologic or pathologic contraindication. The reason for this is that heat will stimulate complete evacuation, will destroy parasites and many bacteria, will improve the circulation of the entire colon, and will improve drainage of the tissues, both outwardly into the lumen and inwardly into the lymphatics and portal circulation. Most patients can

tolerate a solution at a temperature of 47° or 48° C (116° to 118° F.) in the colon. This means that the temperature in the jar should be about 50 degrees C. However, certain other factors must be taken into consideration, such as the nature of the solution, sensitivity of the patient, blood pressure (the temperature should be materially reduced in cases of hypertension), etc.

Before receiving colonic therapy, every case tentatively diagnosed as one of systemic toxemia with strong colon implications should be accorded a thorough diagnostic study. Should a pathosis other than foci of infection be found, its influence upon the systemic condition should be carefully appraised.

From what has gone before, the purpose of a series of treatments must now be evident. The colon must first be cleansed of old residues, impactions, mucus plaques and casts, etc. This process may require from four to six treatments. Following this the mucosa must be treated and its circulation improved, interlining adhesions must be separated, benign ulcerated areas and abrasions healed, and the bacterial flora brought under control. Finally stasis must be overcome and normal function reestablished. This will ensure the breaking of vicious circles, with some real assurance that results may be more than merely temporary.

Irrigations in Series

The technic of the series is as follows: The patient should be placed upon a smooth, low-residue diet. All cathartics and enemas should be stopped and the patient impressed with the fact that he must get plenty of rest. The first treatment should be a mild one, the medicated solution consisting of Neo-Silvol, 25 grains (1.65 Gm.) to a quart of water at 45° C. The next day a solution of sodium carbonate, one dram (4 Gm.) to the quart, at 50° C., may be used. The third day, a solution of acid sodium phosphate, ½ ounce to the quart, and Neo-Silvol 25 grains. The fourth day, if the patient is standing the treatments well, a solution made up as follows may be used: Sodium salicylate, ½ ounce (16 Gm.); sodium phosphate, granular, ½ pound (500 Gm.); Neo-Silvol 40 grains (2.6 Gm.), dissolved in one quart of water and elevated to a temperature of 45° C. (113° F.). On the fifth day one ounce of a stock solution of the following may be used, diluted to one quart: Phosphoric acid (85%), 3 drams (12 cc.); C. P. hydrochloric acid, 6 drams (24 cc.); potassium permanganate, 1 ounce (32 Gm.); water to make one gallon. These last two

solutions were worked out by Schellberg and have proved of great value. They should, however, be used with discretion, because of their strongly stimulating effect. Following this, any of the following solutions, may be used, according to indications: Zonite, 1 ounce (32 cc.) to the quart; sodium thiosulphate, 1 ounce to the quart; Pathogenicide, 2 drams (8 cc.) to the quart; saponified oil, 2 drams to the quart; and finally, 4 ounces of a heavy culture of *B. Acidophilus* to the quart, consecutively, several times.

After the first week, treatments are given on alternate days, making twelve in all over a period of three weeks. In most cases this will be sufficient. However, no therapeutic regime should adhere too strictly to a formula, and one should not hesitate to continue treatments as long as indicated. Should a series be much prolonged, the interval between treatments should be lengthened to four or five days, and later to a week. In all such cases the diet should be fortified with additional vitamins and mineral substances.

The follow-up management of the case is very important yet difficult to carry out, since most patients somehow get the idea that, with the last irrigation, they ought to be well. This is unfortunate, for results are not often spectacular. Indeed, after the initial improvement, which occurs generally toward the end of the first week, progress is apt to be slow. It is not at all unusual for the patient to show his greatest improvement about a month after all active treatment has ceased, as if the system had needed this extra time to drain out some diffuse focus or a badly infected lymphatic drainage system.

A series of irrigations, though not causing pain, is unpleasant and somewhat exhausting to the patient. Therefore, if he is unable to observe daily improvement, he is apt to become impatient and discouraged. The physician should explain to him the theory of this treatment and the reasons for delayed results. He should ask the patient to report to his office weekly, for at least a month or six weeks following active treatment. This will afford the physician an opportunity to check frequently on the condition of the bowels, to prevent a return to cathartics or enemas, to initiate some sort of regulatory regime, but most important of all, to bolster the morale of the patient until he has received the complete benefit of his treatments.

107 Oak St.

★ Notes and Abstracts ★

Electrotherapy: Iontophoresis*

IONTOPHORESIS consists in the introduction into the tissues of the body of drugs in the form of ions, by means of the galvanic electrical current. When a solution of calcium chloride is used, electrolysis occurs, with decomposition into positive Ca and negative Cl ions. The positive Ca is attracted to the negative pole and thus remains in the electrode; the negative Cl is attracted by the positive electrode, placed on another part of the body, and thus the chlorine is driven into the tissues.

Parenteral administration of drugs by iontophoresis: Drugs administered by iontophoresis have local effects and also general effects, as they are absorbed through the capillaries. Zinc, copper, silver, mercury, magnesium, lithium, quinine, calcium, aconitum, adrenalin, and histamine are positive ions, which will be driven into the tissues when placed on the *positive* electrode. To introduce negative ions, such as salicylates, iodides, and chlorine, the *negative* electrode should be soaked in sodium chloride, potassium iodide, or sodium salicylate solution.

Clinical uses: Zinc kills germs and forms an albuminate, which provides a sterile covering for ulcers, superficial infections, et cetera; calcium diminishes neuromuscular excitability (infantile tetany) and cell permeability (edema); lithium is of value in gout; quinine is analgesic; iodine is used for metabolic effects; histamine is a powerful counterirritant (arthritis, sprains). Three treatments of from 15 to 20 minutes are given weekly, for six weeks.

A. P. CAWADIAS, M.D., F.R.C.P.
London, Eng.

Treatment of Arthritis

TREATMENT by fever therapy has been successful for gonorrheal arthritis, but is dangerous; (2) ultraviolet irradiation is used for tuberculous and psoriatic arthritis; (3) ionization with sodium salicylate is of value in hypertrophic and osteoarthritis, as is also general irradiation with ultraviolet rays. Still's Disease, gout, and Heberden's nodes are favorably influenced by ionization with a lithium salt in 1-percent solution; (5)

traumatic arthritis responds well to magnesium sulphate ionization, during the acute stages. In the chronic stage, with adhesions, I employ ionization with sodium chloride, which exerts a lytic action on fibrous adhesions when employed with the negative pole.—J. ECHTMAN, M.D., in *N. Y. S. J. M.*, Feb. 1, 1938.

Electrocoagulation

HEAVY coagulation currents, when applied to small surfaces, will generate dangerous temperatures to a depth of several millimeters. Care to use short applications, or moving the electrode, will eliminate the danger.—*Ann. Surg.*, Feb., 1937.

Prevention of Roentgen Sickness by Vitamin B

THE SYMPTOMS of roentgen intoxication in experimental animals are similar to those of Vitamin B deprivation; experimentation confirmed this belief. Administration of this vitamin considerably alleviates roentgen sickness in human beings.—C. L. MARTIN, M.D., and W. H. MOURSOUND, M.D., in *Am. J. Roentgen. & Rad. Ther.*, Oct., 1937.

"Sprains" of the Wrist

MANY so-called sprains are in reality fractures of the carpal scaphoid. These symptoms and signs are present: Tenderness at the base of the thumb, pain on gripping, and slight edema on the dorsum of the wrist. Pain and weakness persist unless the hand and forearm are immobilized in a plaster cast for from eight to ten weeks. The cast should be circular, should extend from the base of the fingers (with the thumb completely encased) to elbow, and should be heavy enough to stand wear. Before permitting use, take roentgenograms in two directions. If bone has not filled in the fracture gap, the cast must be repeated for two months.—KELLOGG SPEED, M.D., in *Jour. Bone & Joint Surg.*, Oct., 1935.

**Br. J. Phys. Med.*, Dec., 1937.

Fever Therapy for Gonococcic Urethritis

HYPERPYREXIA treatments are valuable therapeutic aids in the treatment of gonococcic urethritis. A number of patients were cured by one such treatment. This type of therapy is a hospital procedure, requiring trained personnel. There was only one death in 283 cases treated during six years. This fatality occurred early in the series, before the symptom of failure to perspire was appreciated.—S. L. WARREN, M.D., W. W. SCOTT, M.D., and C. M. CARPENTER, M.D., in *J. A. M. A.*, Oct. 30, 1937.

★ Books ★

Fever Therapy

FEVER THERAPY. *Abstracts and Discussions of Papers Presented at the First International Conference On Fever Therapy, 1937.* 486 pp. New York: Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers. Price, \$5.00.

In a few short years, fever therapy has grown into a separate branch of medical science, based upon knowledge of medicine, pathology, physiology, and the physics of heat and electricity. Throughout the world, hundreds of medical men are using this new mode of treatment on various types of diseases, some of which have not been amenable to any form of therapy hitherto. Yearly conferences have been held in this country, in which research workers and clinicians exchanged views, since 1931. In 1937, an invitation was extended to pyretotherapists all over the world to meet in New York in an International Fever Therapy Conference. These bound proceedings represent abstracts, in English, German, and French (with discussions in English), of the various papers presented at this Conference.

Professor A. D'Arsonval wrote, "I am persuaded that the therapeutics of the future will employ heat, light, electricity . . . and the most poisonous drugs will give place to these imponderables that introduce no poison into the organism." This was written in 1882.

Papers were presented in various groups: (1) Physiology and pathology, including the mechanism of fever production, changes in the blood during fever therapy, sedation, and fluids in preparation for such therapy; (2) fever therapy of cardiovascular diseases, peripheral vascular lesions, acute rheumatic fever, chorea, neuritis, ocular diseases, meningitis, and alcoholism; (3) fever therapy of syphilis; and (4) fever therapy of gonorrhea. These papers include heat treatments carried out by diathermy,

radiotherapy, the Kettering "heat-box," injections of sulphur, malaria (one French investigator injects blood containing malarial parasites directly into a frontal lobe of the brain, in the treatment of general paresis), vaccines, and other agents.

The general practitioner who does not read these abstracts will not be aware of the benefits his patients may receive from fever therapy in such diverse conditions as angina pectoris (transcardial diathermy with short-wave), hypertension, varicose ulcers, gonococcic arthritis (remarkable curative powers are evidenced by hyperpyrexia), early optic atrophy, and neuritis (fever therapy plus vitamin therapy).

★ News ★



Courtesy, Eastman Kodak Co.

Sharper Details

WHEN the microscopist finds the appearance under his eye hazy and lacking in detail, he focuses his instrument more accurately and obtains a clear picture.

The roentgenologist cannot focus his machine, if he is getting muddy films, but he can use one of the new Eastman high-definition x-ray intensifying screens. The upper picture, above, was made without a screen, and the lower one with one of these new screens, which are especially useful in making roentgenograms of the thicker parts of the body.

A longer exposure or higher voltage must be used to obtain good results with this screen.

A Living for the Doctor

(The Business of Medicine and the Art of Living)



Associate Editor: Ralph L. Gorrell, B.S.M., M.D., D.N.B.

Seeing Ourselves As Others See Us

TO GET a true perspective on ourselves and our actions, we must look, not to the public, for whom we are always more or less on parade, but to those with whom we are associated in our work and play. Nurses, wives, secretaries, and pharmacists can rid us of the conceit which so quickly appears when there is no one to criticize us impersonally.

The *American Professional Pharmacist*, which is the voice of prescription pharmacists, not the commercial druggists, has this to say in its August editorial:

"The conflict between the A. M. A. and the exponents of State Medicine is approaching a bitter stage and, to us pharmacists, seems to profit neither. The problem can best be solved by frank discussion.

"It is medicine's economic problem, and with its failure to recognize a need; or its tendency to be too quick to condemn pharmacy in its time of trial; loath to lend a helping hand to pharmacy in time of need; and, at the first pinch of depression, quick to usurp its dispensing privilege, Medicine now finds itself alone in its problem.

"The chief aim of the nationalizers is to provide medical care for those in need of it. During the past decades, the young intern was bred with the idea of 'specialization,' of connection with this institute or that foundation, and deserted were the ideals of the general practitioner. As a result, doctors cared not to establish practices in relatively poor neighborhoods, country districts, and where the chances for reward were few . . . Medicine will find a convincing contrary

argument necessary, rather than mere condemnation of State Medicine."

We remember, a few years ago, when in conversation with the head of a leading medical placement organization, we asked as to the possibility of obtaining a physician from a famous clinic for association in a small town practice. She answered frankly, "You will never get one of their graduates to locate in a city of less than 15,000."

To the public, many millions of whom live in small towns and cities, it seems a bit difficult to explain that the well-trained physicians will not take care of them. Then, when the advocates of State Medicine begin to advertise good medical care to all, this subconscious resentment may well sweep away the whole structure of Medicine.

R. L. G.

The Wrong Argument

THE medical profession must be very tactful in its criticism of any plans, no matter how crack-brained, for the socialization of medicine. Politicians have found it highly profitable to promise good care at the other fellow's expense, and as promptly label any comments on the part of physicians as defense reactions. It must be admitted, too, that some of the arguments advanced by the profession are illogical, when considered from the patient's viewpoint.

Consider yourself a dental patient, when

reading this message from the president of a state dental society: "Any one who takes up panel dentistry gives up his dental liberty and independence and sinks to the level of commercial serfdom. The proportion of automobiles to dentists in England is one in forty and in Germany, one in sixty. You know that practically every dentist in the United States owns his own

car. You are lucky. The world marvels at our progress and success."

Where is the welfare of the patient even mentioned here? The public would be much more impressed with facts and cases to illustrate the poor type of care given under state supervision, than by reciting the poor condition of the professions.

R. L. G.

★ Notes and Abstracts ★

Social Hygiene*

SOME TIME ago the charitable institutions and the reformatory schools were asked to take charge of the rearing of the six children of a certain married couple in this fair state. The children were running wild, and were not being brought up as future citizens of this great state and country deserve. The already overcrowded institutions were given the task of completing the job which these parents, so poorly prepared, had started. Very well, there was nothing else to do about it. A close look at the parents should have warned the community years ago that they were unfit to have children, but folks are optimistic about weddings as a rule, and the State gave them a license and the church blessed them.

But this is but half of the story. This couple are still well within the age of reproduction. It is not unlikely that they may have four or five children more. Their inability to raise children has been demonstrated beyond question, and yet the sovereign state is powerless, in this age of science and efficiency, to do a thing. Funny, isn't it?

A county clerk was talking to me, and I was berating him and his fellows for granting marriage licenses to such folks. He told me two stories, the first of which happened to him personally. He had studied these matters and was determined not to license such persons as it is the evident intent of the law to keep out of wedlock. He refused a number of couples, and they merely laughed at him. They simply went somewhere else and got the license and came back and gave him the merry razzberries. Besides he missed a fee which he might just as well have had. By refusing them

he merely made trouble and enemies—and people in politics don't like to make enemies.

One day a degenerate man and a feeble-minded girl came in to be married. He refused them a license, thinking this time that he was getting somewhere, because he thought likely they would not know enough to go elsewhere, or would not have the money. "All right then, I'll live with her anyway," said the man, and he did. The neighborhood was scandalized, and criticized the clerk severely. A year later indignation ran high—a baby was soon to be born. A petition was passed, headed by two ministers and signed by all the good people in the community, demanding that a license to marry be granted to this couple so that this scandalous relation might be sanctified. There was no intention of cleaning up the mess, as we would do if it were a matter of ordinary hygiene; it was merely intended to cover up the foul-smelling nuisance with the odor of frankincense and myrrh.

The other story was of another clerk who refused a license to a couple described somewhat as follows: The prospective bridegroom did not know how old he was, did not know his birthday, or the year of his birth; did not know the day of the week or month of his longed-for wedding day; he had no job, and had never had a job that paid more than six or eight dollars a week; he had the grand sum of two dollars and a half, of which, if I remember correctly, two dollars would be required for the clerk's fee; he had no place to stay, except that they had been invited to spend the nuptial night at the home of a friend—Oh, Night of Love! The blushing bride was a tuberculous, hunchbacked, imbecile, who had spent practically all of her life in an asylum for

*Reprinted from *Bul. Ind. St. Board of Health*.

the poor, and in a sense had been released because she had a chance to marry, though the asylum authorities probably did not know this (she had come from an adjoining state). The clerk refused the license on his own responsibility, putting the matter up to the judge. The judge advised him to grant the license.

A degenerate family of father, mother, and ten children lived in a human sty. Not one of the dozen but would have been flattered by the term "half-wit"! Three miles away lived another similar family, except that the latter was somewhat more intelligent, but much more depraved. Two boys of the first family married two girls of the latter—at least I think they were married. Anyway they are following one of the Biblical injunctions, "Be fruitful and multiply." Each of the wives now has four or five children, but there is no assurance whatever that the respective husbands are the actual fathers.

It is true that the right to a mate is a fundamental human right; that the right to bear children is the most sacred privilege which one may hope to attain. I cherish these rights above all others. I have four beautiful children of my own and would not wish to be deprived of them or the right to have others. My right to vote—I would fight to preserve it—has probably never decided a single election. Indeed I know it hasn't, because I never voted for anyone that got elected that I can think of just now. My right to drive a car—so long as I do not abuse that right; my right to go unmolested about my business or pleasure—so long as I do not molest others; my right to own property—so long as I do not put that property to uses that are inimical to the welfare of the community; my right to worship God as I see fit, and to hold my own peculiar form of heterodoxy—so long as I grant others the same right, are very dear to me. But dear as they are, they are as nothing compared to the right to bear and rear children. These blue-eyed kiddies, they are we, us, me, mine. They are IT. And I don't mean possibly!

I am saying these intimate things because I want it clear that I appreciate the sacredness of the rights concerning them. The right to a mate and children is a most sacred thing. It is too sacred to place in the hands of nitwits and degenerates; it is too sacred to turn over to lascivious pigs who wish merely to make unlimited sexual indulgence convenient and safe. It is sacrilegious to convert the house of God into a stable; it is an indignity to drag the flag through the slime; it is disgusting to hear a burlesque-queen eulogizing the name of mother; but not more improper than the licensing of the marriage of a couple of

simpletons, or the blessing of the church upon the union.

Time was when we left the dirt in the milk and simply made it safe by pasteurization; when we left the sewage in the water and made it safe by adding chlorine; when we fumigated a sick room with foul gases that would presumably kill the germs, but left unmolested the dirt in which the germs were; when the surgeon didn't wash his hands, he merely dipped them in a carbolic acid solution. Nowadays, however, we insist that the dirt be kept out of the milk in the first place and then let it be pasteurized; we try to keep the sewage out of the water, and then filter it besides; we scrub the room which we are wishing to make safe; we insist that the surgeon shall scrub and scrub and scrub. We want folks to bathe, rather than cover up their B. O. with perfume; we want them to get rid of their "halitosis" instead of taking "sensens," as we did in the old days. As a result of these changed attitudes, hygiene sanitation, and preventive medicine have made amazing progress in recent decades.

Racial hygiene demands exactly the same prophylaxis. We can never solve the problems of the race, the nation, the community, the family by spreading on the sweet ointment of public charity and personal philanthropy, excellent and commendable as they are. We can never solve the problem of the poor by carrying Christmas baskets to the slums. We can never really improve a great many of the appalling problems until we realize that not all marriages are made in Heaven. It sounds nice to say, "Whom God has joined together—," but what shall we say about those whom—if we may judge by the outcome—the Devil has joined together?

Preventive medicine has been in the same pickle. Time was when it was heresy to think that germs and filth and lice and flies caused epidemics. In those times it was "Divine Providence," the "Hand of God," the "Inscrutable Will of the Most High," that brought famine and pestilence. We know better now, and are far healthier. Now we recognize that all those things that happen on earth have a sufficient earthly cause. Will we ever learn that this matter of human relations and reproduction is on exactly the same basis? We have tried to solve these problems with education, with religion, with philanthropy, with legislation, with social work, and have failed. The problems are increasing faster than the solution. When will we learn to apply to biologic problems the obvious biologic solutions? When will we have learned to take the bull by the horns while he is still a calf?

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Ten Points for the People's Protection

1.—All features of medical service, in any method of medical practice, should be under control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control.

2.—No third party must be permitted to come between the patient and his physician in any medical relation. All responsibility for the character of medical service must be borne by the profession.

3.—Patients must have absolute freedom to choose a legally qualified doctor of medicine who will serve them, from among all those qualified to practice and who are willing to give service.

4.—The method of giving the service must retain a permanent confidential relation between the patient and a "family physician." This relation must be the fundamental and dominating feature of any system.

5.—All medical phases of all institutions involved in the medical service should be under professional control, it being understood that hospital service and medical service should be considered separately. These institutions are but expansions of the equipment of the physician. He is the only one whom the laws of all nations recognize as competent to use them in the delivery of service. The medical profession alone can determine the adequacy and character of such institutions. Their value depends on their operation according to medical standards.

6.—In whatever way the cost of medical service may be distributed, it should be paid for by the patient, in accordance with his income status and in the manner that is mutually satisfactory.

7.—Medical service must have no connection in any cash benefits.

8.—Any form of medical service should include within its scope all qualified physicians of the locality covered by its operation who wish to give service under the conditions established.

9.—Systems for the relief of low-income classes should be limited strictly to those below the "comfort level" standard of incomes.

10.—There should be no restrictions on treatment or prescribing not formulated and enforced by the organized medical profession.—From "Who Wants Socialized or State Medicine?" Michigan State Medical Society.

CLINICAL MEDICINE AND SURGERY is not "Just another magazine." It is very valuable to me, and I only wish I had subscribed for it years ago.—C.M.M., R.N., New York.

Country Doctor*

(To My Father)

BENEATH his linen duster, sagged and bent,
Day out, day in, for fifty years or more,
Up the red clay hills and down he went,
His black, square case upon the buggy floor.
I've heard his horses pounding down the lanes,

Lashed to a desperate lather and to foam;
I've seen him give the weary team the reins
And, worn out, sleep, the while they ambled home.

His eyes were set in crinkled lines of mirth,
Cheer was prescribed with dreaded calomel;
He was the arbiter of death and birth,
The go-between of heaven and of hell.
Tender as a woman, steadfast as rock,
Small wonder all the hill-folk loved 'Old Doc'!

ETHEL ROMIG FULLER.

Portland, Ore.

A Decalogue of Character

- 1.—Keep physically fit.
- 2.—Cultivate good habits.
- 3.—Remove unnecessary stress and strain.
- 4.—Face and accept reality.
- 5.—Plan a daily schedule of activities.
- 6.—Ambition should contribute to doing.
- 7.—Live in terms of *we*, not *I*.
- 8.—Cherish a sense of humor.
- 9.—Know yourself; accept yourself; be yourself; improve yourself.—F. L. PATRY, M.D., in *Med. Times*, Oct., 1937.

Use our reader service department
"Send for This Literature."

Doctors Should Patent Medical Discoveries

IT IS UNETHICAL for a physician *not* to patent a medical discovery, for the following reasons:

- 1.—If he does not, someone else may do so as soon as it is reported.
- 2.—If patented by selfish persons, it may be developed so as to harm the public.
- 3.—If not patented there is no way to control the quality of the product nor the price at which it is sold.

The physician who wishes his discovery to be of the greatest benefit to humanity should patent it, and then develop it for the public benefit.—ARTHUR G. CONNOLLY (patent attorney), of Wilmington, Del., in *Science*, Oct. 29, 1937.

*From "White Peaks and Green."

The Seminar

"A Monthly Postgraduate Course"



(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Illinois.)



Problem No. 3 (Diagnostic)

Presented by P. E. Weimer, M.D.,
Chicago, Ill.

(See CLIN. MED. & SURG., March, 1938, p. 127)

RECAPITULATION: A young man of 26 years lost 18 pounds in weight, during a period of several months. His appetite was poor, and even when he felt hungry a very little food caused a sensation of fullness. He was weak, pale, and undernourished. There was no spontaneous pain nor meteorism in the belly at any time, and his bowel action was normal.

Examination revealed a hard, sensitive mass, 1 centimeter in diameter, at the umbilicus, but otherwise the abdomen was negative. *Blood studies* showed moderate anemia of secondary type, with a normal number of leukocytes. His *stools* contained no blood or parasites. *Gastric analysis* showed a rather low free hydrochloric acid figure (18), with a relatively high total acidity (42); no blood, sarcines, nor Boas-Oppler bacilli. Two *roentgenologic studies* of the gastro-intestinal and biliary tracts were made, but no significant findings were reported.

Requirements: Suggest diagnosis and treatment, giving reasons. What further examinations would you have made?

Discussion by Geo. C. Croston, M.D.,
Sapulpa, Okla.

One cannot positively arrive at a diagnosis in such a case as that presented in this problem. The symptoms presented are inadequate to even justify a guess. Loss of weight, loss of appetite, and anemia are of very little importance in arriving at a differential diagnosis.

Loss in weight, *per se*, is actually non-diagnostic. Practically every disease of a

serious import produces a loss in weight. It is of no value in arriving at a diagnosis in this case, as given.

Loss of appetite, or anorexia, is also, to a certain extent, non-diagnostic. There are some 50 to 75 different diseases of which anorexia is a symptom.

Anemia is equally as bad as loss in weight or anorexia in determining a diagnosis in this problem. Some 60 or more diseases produce anemia, hence, even when coupled up with the loss of weight and loss of appetite and then taken as a syndrome of anything, brings one no closer to a final conclusion.

There is no royal road or "quick trick" way to diagnosis. Guessing is equal to the legal saying, "Ignorance of the law excuses no one."

To properly come to a conclusion and to be able to label a disease, it is necessary, in most instances, to study intensively all the clinical data available in reaching a correct diagnosis.

In the absence of any examination report on the nervous system, the eye, ear, nose and throat, the respiratory tract, the genito-urinary tract, or the patient's sanitary or hygienic surroundings; with no information about his diet or sexual life; no laboratory report on the umbilical findings, the clinical picture as presented is not complete enough to permit one to hazard an opinion as to a diagnosis or suggest a logical line of treatment.

If this discussion seems to be critical or hypercritical, it is not so intended, but is meant to be a truly constructive suggestion.

Discussion by George B. Lake, M.D.,
Waukegan, Ill.

Here is a fairly typical picture of *severe chronic disease*, of undetermined type, which has not been sufficiently investigated (or at

least we have no report of such investigation) so that a definite diagnosis, from the data presented, is practicable.

We have no report of an urinalysis or examination of the chest or of a Wassermann test; no differential leukocyte count; no record of the temperature, pulse rate, blood pressure, condition and appearance of the skin and sclerae, facial expression, odor of the stomach contents and stool, or texture of the musculature; there is no history of his previous life, habits, and physical condition.

The *general picture* is such as might be presented in cases of chronic pulmonary or peritoneal tuberculosis, carcinoma of one or more of the abdominal organs, mild chronic scurvy, latent syphilis, hookworm infestation, and a number of other chronic disorders.

The only characteristic finding was the small, hard, sensitive tumor of the umbilicus which, in all probability, was a neoplasm of some sort and called for further, detailed examination. The general preponderance of gastric symptoms should have suggested the advisability of a gastroscopic examination.

The weight loss of 18 pounds was probably more significant than it appears, as the patient seems to have been underweight before this occurred.

One examination of the stool (and there is no record of more than one) does not rule out intestinal parasites or blood.

The *relatively* high total gastric acidity suggests a test for the presence of lactic acid.

The best *guess*, in spite of the negative roentgenologic report, is a malignant neoplasm of some part of the alimentary tract.

In the absence of a reasonably well established diagnosis, no line of treatment can be outlined intelligently.

Discussion by D. C. Ragland, M.D.,
Los Angeles, Calif.

It is evident that the young man was definitely underweight, even before he lost 18 pounds. At his age and height he should weigh from 150 to 155 pounds.

His appetite has failed, but his digestive capacity has been reduced also. This is shown by his blood count and his weakness. When one cannot adequately digest food, one cannot get the energy out of it.

The full feeling, after eating a little, is frequently caused by a slight spasm of the pylorus. This full feeling, taken with the low acid values in the stomach contents, negative gastro-intestinal x-ray studies, and absence of blood and parasites in the stools, all suggest pancreatic hypofunction. It must be remembered that hydrochloric acid is the activator of the duodenum, and that the duodenum produces secretin, which, in

turn, is the activator of the pancreas. And, be it not forgotten, the pancreas produces all three enzymes—protease, lipase, and amylase. If one is deficient, then all three are deficient.

The blood serum enzyme test of Oelgoetz should be a help in diagnosis. Two determinations should be made. The first test should be made after three days of a starchless diet; the second after one day of a heavy-starch diet. If the first test is normal and the second is minus 4, 5, or 6, there is no doubt about the case being one of pancreatic hypofunction or food allergy.

We come into life with a perfect equipment for digesting proteins, fats, and sugar. The starch digesting mechanism is frequently prevented from developing by overloading with starch in babyhood. Somehow, we forget that living protoplasm is *protein*, and can be nourished only by protein. Babies should not have starches until they have molar teeth to grind the starchy foods.

In addition to the blood tests mentioned, I should want a urinalysis, with some study of the indican content; also blood pressures in the standing and recumbent positions, with the pulse rate counted in each position. The systolic pressure should normally be from 2 to 10 points higher standing up than reclining. The pulse rate should be 12 to 16 beats faster up than down. The pulse or mean pressure should be the same in both positions. If the pressures are higher reclining and lower standing (the reverse of the normal), there is *autonomic imbalance*. This can surely result from inadequate digestive capacity.

If the Oelgoetz test shows a definite pancreatic hypofunction, the treatment should be the elimination of foods made from cereal grains (all six); 15 grains of total dry pancreas 3 to 4 times daily, at meals; and last, but not least, the ingestion of eight ounces of acid milk and egg mixture every 12 hours, but after the regular meal.

Solution by Dr. Weimer

On November 1, 1937, the patient was taken to the hospital, where a laparotomy was performed. A wide incision was made of the umbilical tumor, and a frozen section was taken, which was reported as a metastatic tumor of the gastro-intestinal tract. The abdomen was immediately opened, and we found, in this 26-year-old male, the following:

- 1.—A carcinoma of the cardiac end of the stomach, size 7 x 5 cm.
- 2.—A carcinoma of the pylorus, size 2 x 4 cm.
- 3.—The right lobe of the liver entirely carcinomatous.

4.—The left lobe of the liver showing many carcinomatous nodules.

5.—Carcinoma of the ileo-cecal valve, size 1 x 3 cm.

The abdomen was closed, and although the patient was still alive at the time this was written, he was gradually growing weaker, and obstruction, as well as hemorrhage, was progressive.

Problem No. 5 (Diagnostic)

Presented by Harry L. Reinhart, M.D.,
Columbus, O.*

A WHITE MALE, 34 years old, was admitted to our hospital complaining of "pain in the left chest and shoulder, a slight cough, and an afternoon fever." The onset of his illness was approximately 10 weeks previous to his admission, at which time he was "generally run down," very weak and had some fever. He was in the hospital from the fourth to the seventh week of his illness, and was discharged without a diagnosis, his temperature having remained about normal during the last week of his stay.

The week following his discharge from the hospital (eighth week of his illness), his temperature was apparently normal. During the ninth week his fever recurred and he had aching pains of the left chest and the left trapezius ridge. An x-ray study of his chest revealed "a dome-shaped area of consolidation of the left lung, lower lobe, about the size of an orange."

He was then admitted to Starling-Loving Hospital, with an illness of 10 weeks' duration and a weight loss of about 20 pounds (admission weight 111 pounds; usual weight about 134 pounds).

On admission, his temperature was 102° F; pulse, 120; respiration, 20; blood pressure 102/54. Chest examination revealed dullness, decreased breath sounds, and impairment of vocal fremitus in the anterior and posterior left lower lung. The apex beat of the heart was diffuse. X-Ray pic-

tures of the chest, three days after admission (17 days after the above-recorded x-ray report), noted: "Healed (T.B.) lesions of the lungs at the level of the left first and right second interspaces."

Paracentesis of the thorax through the seventh intercostal space on the left side revealed, on direct smear, an occasional gram-negative rod; the same organism was recovered by culture.

During the evening of the fourth hospital day (the 75th day of his illness) he was given a cathartic. (He had been "markedly constipated during his entire illness and had taken a cathartic every other night since he became sick.") During the night he had two bowel movements, the last of which was followed by a sudden, severe, left-lumbar pain, a chill, and a drop in temperature of 6° during the following 12 hours. There was exquisite tenderness all over the abdomen, without localization. (The abdomen had been negative previous to this.) On the 17th hospital day an abdominal laparotomy, under local anesthesia, revealed "a pelvic abscess containing a greenish-yellow fluid which had the earmarks of peritoneal fluid and feces."

Laboratory Examinations: Wassermann and Kahn tests, negative; blood count, third hospital day, erythrocytes, 3,480,000; hemoglobin, 65 percent (Tallqvist); leukocytes, 7,250; polys, 73 percent; lymphocytes, 27 percent. Urine: Specific gravity, 1.025; acid; a trace of albumin; 1-plus sugar; 1 to 2 red corpuscles and 6 to 7 leukocytes per high-power field; an occasional granular cast.

His temperature fluctuated, for the most part, between 100° and 102° F.; pulse, 100 to 120 (last part of illness, 120-160); respirations, 20 to 30. He died on his 30th hospital day. Total illness about 104 days.

Requirements: Discuss this case in detail, stating your opinion of the probable cause or causes of the symptoms and signs reported, with reasons, and the specific additional clinical and laboratory studies which you would have made to arrive at a definite diagnosis.

*Adapted from the Ohio State Medical Journal.

BEAUTY PAYS

Beauty pays! And if we ever should attain to universal enthusiasm for it, many of our sorest economic problems would dissolve. We then would find more satisfaction in activities that are not costly. We would have a standard of living, as distinguished from the standard of spending. And that, after all, may be what we must have before we can climb toward the heights of satisfying life. On those heights dwells serenity, and serenity and beauty are sisters.—JAMES C. DERIEUX, in Good House-keeping.

Clinical Notes and Abstracts



The Fight against Syphilis

AFTER a long, almost inexplicable, delay, the war against the last great citadel of infectious disease is on. At divers points over the land, a concerted action is being taken, not only to curb, but to eradicate the plague of syphilis, which ranks among the five great disease scourges of the country. The unwarranted sense of delicacy against the open mentioning of this disease has been broken down and a determined effort to reveal to the public the appalling ravages of spirochetal infection is being made. Especially in the State of Illinois, public opinion has been aroused to the fighting point, and the interest which has been awakened bids fair to yield gratifying results.

A vital step in this direction is the recently-enacted Illinois law, the Saltiel bill, which requires everyone applying for a license to marry to present a physician's certificate showing that the individual is free from venereal disease of any kind. There are two other Illinois statutes in effect which still further aid in the work of eradication of venereal disease. One, adopted in 1911, makes it unlawful for venereally infected persons to work with or near food that is to be consumed by others. The other, passed in 1919, empowers judges to order examinations for persons suspected of having venereal disease, and authorizing health officials to segregate them for treatment. Other regulatory measures are in force requiring physicians to report to the Health Department of the State all cases of venereal disease.

The importance of these prophylactic measures will be better appreciated if we realize that there are today approximately five million cases of unhealed syphilis in the United States. This deplorable condition has been correctly attributed to the effect of prudery, and its corollary ignorance, which have been principal factors in blocking the eradication of the infection.

Prior to the World War, but very few serious attempts to combat the various venereal infections had been made. The prophylactic measures adopted by the medical service of the United States' armies during the War yielded the first dependable statistics in this country on syphilis and gon-

orrhea, and the impetus thus obtained has been carried down to the present. With the knowledge obtained from a universal application of the Wassermann reaction, an excellent basis will be formed for an energetic and progressive assault upon syphilis.

As Dr. Thomas Parran, Jr., surgeon general of the United States Public Health Service, has stated, syphilis is a youth problem. According to him, ten thousand victims each year are less than fifteen years old. Half of the syphilis acquired each year in this country is contracted by persons under twenty-five years of age. The statistics of gonorrhea show a close analogy to these figures.

Dr. Parran recommends, as an excellent aid in the prophylaxis of these diseases, a course of instruction in the diagnosis of these two venereal scourges in the latter half of the high school curriculum. Such a course has been in force in Wisconsin for nearly twenty years; and this, together with the State's marriage law enforcement, has reduced the prevalence of syphilis in that State by one-half.

Not only will the enforcement of the marriage tests for syphilis provide an excellent means of locating latent cases of the disease, but it must also very materially reduce the percentage of congenital syphilis. These unfortunate children are frequently malformed or mentally defective, and they comprise an appreciable element of those dependent upon the State for support.

In all cases of suspected spirochetal infection of the newborn, the collection of spinal fluid, as well as blood for a Wassermann test, should be made on the tenth day after birth. This, as Dr. P. Brooke Bland, of Jefferson Medical College of Philadelphia, has insisted, should be accompanied by x-ray examinations of the bones of the infant, even should the serum and blood tests prove negative.

Such methods have been enforced in Scandinavian countries, with resultant marked reductions in stillbirths and congenital syphilis. In one of the large obstetric hospitals of Denmark, having more than eighteen hundred deliveries annually, only from one to three cases of congenital

syphilis are found each year. Statistics from the obstetric department of Johns Hopkins Hospital, in Baltimore, show that there were 90 percent of live births among syphilitic mothers who were treated during pregnancy, and only 54 percent in a group of untreated mothers.

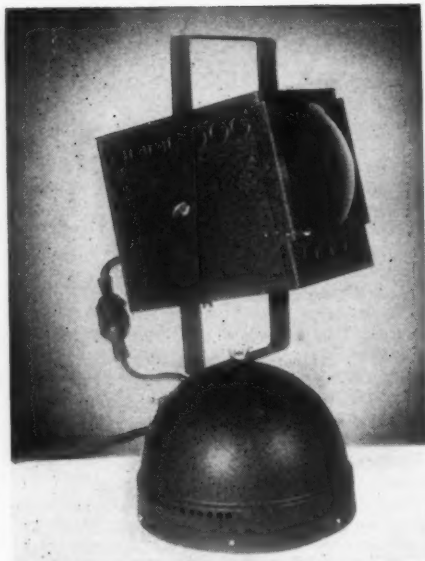
The Bureau of Legal Medicine of the American Medical Association has recently surveyed the venereal disease status for the entire country, and has reported some interesting statistics pertaining to it. Including Illinois, there are but four states requiring physicians' clean bills of health for both parties to a marriage, the other states being Connecticut, Montana and Oregon. Five states—Alabama, Louisiana, North Dakota, Wisconsin and Wyoming—require such a medical certificate from the man only. While not requiring the certificates, other states forbid the marriage of persons suffering from contagious social diseases; while still other states—New York, North Carolina, and Washington—require the marrying couple to sign statements, under oath, that they are free from social disease.

A Federal law, making the medical certificate for both parties obligatory for each state, would be a desirable precautionary measure in the war against syphilis and gonorrhea. We believe such a measure is in effect in Germany, where the number of newly diseased cases has been reduced by two-fifths. An interesting statement, recently made in the International Congress to Fight Venereal Diseases, was to the effect that gonorrhea is disappearing more slowly than syphilis, probably because of the difficulty in discovering that disease in its early or hidden stages. Prof. W. Spiethoff, of Leipzig, believes that the annual German birthrate would increase by nearly 40,000 if gonorrhea could be eliminated. All of which is very interesting and suggestive.

W. A. N. DORLAND, M.D., F.A.C.S.
Chicago, Ill.

Pneumococcus Serums

THERE are now 32 recognized types of pneumococci for which typing serums are available; and therapeutic serums are available for Types I, II, IV, V, VII, VIII, and XIV, while others are under investigation. Types I and II are prepared as monovalent and bivalent serums; for other types, which occur less frequently, bivalent serums are supplied. The simple and rapid Neufeld-Sabin test (see "C. M. & S.," Jan., 1936, page 50) is of great value in making early diagnoses of the types of pneumococci.—CLAUDE P. BROWN, M.D., in *Weekly Rost. & Med. Dig.*, Jan. 1, 1938.



Courtesy, Black-Ray Lighting Co.

"Black Rays" and Fluorescence

IN THE diagnosis of ringworm and other mycotic infections of the skin, as well as in other skin eruptions, including the early (and otherwise invisible) stages of the exanthematous fevers, the fluorescence produced by short ultraviolet rays in dark surroundings ("black rays") is vastly helpful.

This adjunct to diagnosis (which is also of great value in chemical analysis and for many other purposes), is now available at a reasonable price, in the form of the small, portable apparatus shown above, which can be plugged into the regular alternating current lighting system.

Reviving the Collapsed Surgical Patient

IN CASES of apparent death during a surgical operation, artificial respiration by chest pressure, mouth-to-mouth breathing, or insufflation of air or oxygen by way of a rubber tube placed in the larynx should be carried out at once, and the patient placed in the Trendelenburg position (head down).

As the cortical cells of the brain cannot function after eight minutes of complete anoxemia, immediate attempts should be made also to restart the immobile heart. If

the abdominal cavity is open or can be quickly opened, the gloved hand should be inserted up under the diaphragm and the heart massaged vigorously. Injections into the heart through the chest wall may be carried out; apparently the irritation caused by the needle prick, rather than the drug (epinephrin, caffein), is the factor responsible in starting heart action. Five-percent dextrose, or dextrose in saline solution should be available, and given at once. Usually it is wise to make an incision, as the veins are collapsed and hard to find with the needle. Patients with a comparatively normal heart may be expected to respond to revivification therapy.—E. A. ROVENSTINE, M.D., in *Surg. Clin. N. Am.*, Feb., 1937.

Look for THE LEISURE HOUR among the advertising pages at the back.

Insulin in Hyperemesis Gravidarum

FOR THE past six years I have been administering, in cases of hyperemesis gravidarum, 0.5 cc. of Insulin u-20, twenty minutes before meals, gradually increasing the dose to tolerance, and have come to the conclusion that *there is no such thing as pernicious vomiting of pregnancy*; at least, I have had to perform no therapeutic abortion during this time.

At first I gave insulin only in those cases in which I was satisfied that acidosis was present, manifested by the presence of acetone in the urine. However, I have found that it is also useful in those cases in which acetone is absent. I attend in the neighborhood of 200 obstetric cases in a year, and it seems to me that I am qualified to speak on this subject.

I have also found about four percent of babies with enlarged thymus. This is manifested by dyspnea, cyanosis, and a slow heart action. I have found this condition in children who were well developed, and in some who were not. My procedure is to have an x-ray picture of the chest made as soon as any symptoms appear, to verify the diagnosis, and then to institute deep x-ray therapy, at intervals of from five to seven days. Between x-ray treatments I administer oxygen and Adrenalin (epinephrin), as indicated. By this procedure I have been able to save all my babies thus afflicted.

Those men who practice where a high-powered x-ray apparatus is not available are certainly handicapped. With modern

transportation and large hospitals within a reasonable distance, this treatment could be carried out in a large percentage of these cases.

J. A. MARONDE, M.D.

Monterey Park, Calif.

Is the Child Defective?*

IT IS UNFORTUNATE that the term "introvert" has been so widely bandied about, as describing the individual who shuns social contact, prefers solitary exercise, and likes to go along in a quiet way, because this is the normal manner for many children. Do not let anxious parents force such children into dancing schools, camps, and parties, to hasten the process of socialization. *Science has no recipe for hastening the growing-up process.* On the other hand, the mentally backward child should be recognized at as early an age as is possible.

The defective child shows very limited imagination in play—he does the same thing over and over, such as pulling a book in and out or banging a tin auto up and down. His powers of initiative are very limited, and he is content and happy to repeat actions and words. When he begins to pronounce words, the increase in vocabulary is slow. Parents should be told the truth, so that plans can be made for the child's education, and time not wasted on tonsillectomies, thyroid feeding, or other procedures, which will be of no avail unless the child is actually hypothyroid.

ESTHER L. RICHARDS, M.D.

Baltimore, Md.

Significance of Leg Symptoms

EVERY ADULT who presents one or more of the following symptoms should be examined for peripheral vascular narrowing, by palpation of the dorsalis pedis and posterior tibial arteries, at least: (1) Easy and excessive fatigability; (2) persistent coldness, numbness, or burning, limited to the toes, foot, or leg; (3) vague discomforts in the lower leg and foot, often mistaken for "flat-feet," "varicose veins," or "gout"; (4) soreness or aching in the muscles of the lower leg; (5) "rest pain," which comes on at night and is relieved only by sleeping in a chair or with the affected leg hanging over the side of the bed; (6) painful and incapacitating cramps, located in the toes, ankle, or calf, coming on after slight exertion or after walking a block or two; and (7) failure to

*South. M. & S., Jan., 1938.

heal of small abrasions, or of cuts due to careless attention to corns and nails—wounds which become excruciatingly painful as they slowly increase in size. This pain and failure to heal are the result of infection in poorly vascularized tissue.—EMILE HOLMAN, M.D., in *W. J. S. G. O.*, Mar., 1938.

Look for FACTS AND COMMENTS among the advertising pages at the back.

Prognosis of Breast Carcinoma

THE PROGNOSIS of breast cancer depends on: (1) The extent of the disease at the time of mastectomy; (2) the thoroughness of the operation; (3) the degree of malignancy, as measured by its pathologic grade at the time of operation; and (4) the age of the patient.

Any lesion of the breast is considered operable if it is freely movable from the thoracic wall, regardless of ulceration. In some cases, even if there are cutaneous nodules proximal to the tumor, regardless of the presence or absence of palpable axillary lymph nodes, the lesion is considered operable. The same view of operability was held in most cases in which the supraclavicular nodes were palpable, but were confined to one side. In addition, patients were accepted for operation if they had a diffuse type of malignant growth, if it was associated with lactation and, in most cases, if it was associated with pregnancy.—S. W. HARRINGTON, M.D., in *Minn. Med.*, Jan., 1938.

Biopsy of Skin Lesions

A DIAGNOSIS of cancer, especially in the pre-tumor stage, is possible only with microscopic examination. In removing a piece of tissue, remember these points: (1) Use a knife with a razor-like edge; (2) cauterize the wound after removal of tissue; do not suture it, or you will force malignant cells into the lymphatic circulation; (3) never do a biopsy on the same day a lesion has been handled, especially if by more than one clinician; (4) do not pinch, squeeze, or maul the tissue during the biopsy; (5) remove the tissue from the advancing edge and include a piece of normal skin; (6) whenever the size, nature, and location of the lesion are such as to admit of its complete and wide removal, without mutilation and major surgical intervention, such re-

moval is decidedly preferable to a biopsy.—FORTUNATO A. DIASIO, M.D., in *Urol. & Cut. Rev.*, Apr., 1937.

Administration of Iodine during Pregnancy

THERE is everything to be said for the routine administration of iodine during pregnancy; little to be said against it. Concomitant factors, however, are of importance. Iodine medication in the presence of toxic or even non-toxic adenoma, particularly if in minute amounts, may tantalize unstable tissue into serious overactivity.

My attention has been called to a large group of obstetrical patients who show extreme lassitude, marked hypotension with low pulse pressure, frequently moderate anemia, slow pulse, often a subnormal temperature, but without other changes characteristic of thyroid lack. I give these patients thyroid up to the relief of symptoms or the restoration of a normal basal metabolic rate.—G. C. SCHAUFFLER, M.D., in *W. J. S. G. O.*, Mar., 1938.

Is Sinusitis a Surgical Problem?

A FEW YEARS AGO, there was a great wave of enthusiasm for surgical intervention in all cases of chronic sinusitis. During the past ten years, this wave receded to the merest trickle, as careful analysis of end-results revealed the large number of permanently damaged noses and the relatively small number of patients who were permanently "cured." As in any chronic disease (and here the resemblance to arthritis is very strong), which comes in repeated attacks and often presents few subjective or objective signs between flareups, "cure" is a dangerous word unless the patient is followed for a period of years.

The type of person who is susceptible to sinusitis (due to lowered resistance of the mucosa, hypovitaminosis, or poor ciliary action) all too frequently is "cured" of one attack by operation, only to have recurrent sinus infections in from one to three years. Yet a simple displacement treatment, after the method of Proetz, which can be carried out by any general practitioner after two hours of study, will relieve the great majority of sinus attacks in a few daily sessions, at little expense and without causing the patient pain or loss of time at work.

When medical science determines why one individual has a sinus infection with every severe cold and other persons do not, then

we will have the key to rational treatment, and the medieval scraping, gouging, and cutting will be relegated to the past.

Only this year an article appeared in a leading southern medical journal, detailing the technic of a combined antro-ethmoid-sphenoid operation. This formidable procedure requires from two to four hours to perform, with the patient under a general anesthetic the entire time. Of 200 cases operated upon, only 53.5 percent have remained free of any and all symptoms (length of time not given); 42 percent are improved (how much is not stated); 3 percent unimproved; and 1.5 percent *dead as a direct result of the operation*. For a non-fatal, non-disabling illness, this type of treatment brings about more fatalities than routine appendectomy, and "cures" only one-half.

It is unfortunate that such contradictory opinions are held by various members of the profession, as the lay sufferer is bewildered by conflicting advice.

R. L. GORRELL, M.D.

Clarion, Ia.

State Medicine is poorhouse medicine.

Tell your patients.

Elimination Diet*

HOW MANY patients there are who ask for a diet slip, and how many there are who could be helped or cured if we were only to teach them how to find the foods which are causing their gas or indigestion or headache or abdominal pain! We now realize that one-fourth of the dyspeptic patients are specifically sensitive to one or more foods and that the commonest are milk and eggs, which we have always looked upon as particularly safe for the sick.

There are two principal ways of determining the offending foods. When the pain or indigestion or migraine comes in attacks, at intervals of weeks or months, a *written record* should be made of the *unusual* foods, not eaten every day, which were consumed in the twenty-four hours preceding the upset. Suspicion should fall particularly on foods eaten at the previous meal. After three or four attacks, examine the record to see if there was any one food that was eaten before each upset. If there was, this food should be left alone, to see if relief is obtained.

If the distress is present every day, I begin their diet with lamb, rice, butter, sugar, and canned pears, which seldom cause

trouble. If the patient is comfortable on this diet, I begin to add beef, potato, gelatin, carrots, turnips, asparagus, string beans, arrowroot cookies, rye krisps, thin toast, and oatmeal, watching for trouble after each addition.

WALTER C. ALVAREZ, M.D.

Rochester, Minn.

Benzedrine Inhaler for Children

A SERIES OF 75 children exhibiting rhinologic symptoms due to infection or allergy, the ages varying from one to twelve years, was treated with the Benzedrine inhaler. No difficulty of administration was encountered with either the infants or the older children.

Clinical observation, made fifteen minutes after use of the Inhaler, showed marked shrinkage of the nasal mucosa, resulting in decongestion of the nasal passages and relief from "stiffness." All the cases of acute rhinopharyngitis and sinusitis were benefited. Those with otitis media received relief from *nasal* symptoms, although it did not alter the course of the disease. This was also true of two cases of asthma. No results were obtained in two cases of epistaxis. In no case were any ill effects noted, such as headache, sleeplessness, restlessness, or gastro-intestinal disturbance.—EARL S. VOLLMER, M.D., in *Arch. Otolaryng.*, July, 1937.

Injections of Whole Blood

IN RECENT YEARS, the use of intramuscular injections of whole blood has been found by many to aid in reducing infant mortality, in many instances. It is generally believed that such injections have their chief value in:

- 1.—Infants showing signs of hemorrhagic disease.
- 2.—Infants evidencing symptoms of intracranial hemorrhage.
- 3.—Premature infants who are not in good condition.
- 4.—Babies born after long or traumatic operative delivery.
- 5.—Infants born of toxemic mothers.

The following technic has been suggested:

The blood should be given immediately after birth. The required amount (20 to 30 cc. for full-term infants, and 5 to 15 cc. for prematures, depending upon their size) should be drawn from the basilic vein of the mother, *unless she is toxemic*, and should be

*Ohio S. M. J., Oct., 1937.

injected into the thighs or the buttocks, and not under the breasts. The injection should be repeated at intervals of from 12 to 48 hours, depending on the symptoms the infant reveals.

It is the opinion of many outstanding obstetricians and pediatricians that, if such intramuscular injections of whole blood are given to infants in these groups, many lives will be saved.

HERMAN N. BUNDESEN, M.D.
Chicago, Ill.

Recent Advances in the Diagnosis and Treatment of Urologic Disease in Children*

IT IS ONLY in the past ten years that urologic problems in pediatrics have been studied well. Miniature cystoscopes are now made in all sizes, so that, if necessary, the bladder of a new-born male infant may be visualized and kidney roentgenograms made.

With proper attention to preoperative and postoperative care, and improved surgical technic, it has been found that even young infants withstand radical urosurgical treatment as well as their elders, or better. Intravenous urograms are made before cystoscopy.

In the treatment of acute urinary infection, intestinal elimination must be adequate; a large fluid intake, especially of dextrose solution to combat acidosis, is needed; and nutrition should be maintained. Urinary antiseptics may upset the intestinal tract. If no relief is experienced in from 3 to 5 days, a complete urologic examination is indicated. Renal obstruction (infected hydronephrosis) or renal or perirenal suppuration will almost always be found. The mere passage of a catheter to the kidney pelvis, in an acute infected hydronephrosis, will rapidly cause the disappearance of fever and sepsis. I have observed this in children as young as eight weeks.

Treatment of chronic urinary infections: The existence of pyuria that necessitates the use of strong antiseptics or the ketogenic diet, calls for urologic investigation. Unless this is carried out, a certain number of patients will eventually sustain damage to one or both kidneys, as a result of unrecognized urinary backpressure.

Treatment of enuresis: One case in six has some degree of urinary retention, due to congenital bladder-neck obstruction or neuro-muscular vesical disease. In five cases, unrecognized renal tuberculosis caused secondary vesical infection and the symptoms of frequency and incontinence.

*Urol. & Cutan. Rev., Aug., 1937.

Urethral stone, vesical overflow, and tuberculosis were diagnosed as idiopathic enuresis by well trained pediatricians.

MEREDITH CAMPBELL, M.D.
New York City.

Ten Commandments of Good Posture

- 1.—Stand tall.
- 2.—Sit tall.
- 3.—Walk tall and "chesty," with weight transmitted to the balls of the feet.
- 4.—Draw in the abdomen, pulling it backward and upward.
- 5.—Keep the shoulders high and square.
- 6.—Pull the chin down toward the collar button.
- 7.—Flatten the hollow of the back by rolling the pelvis downward and backward.
- 8.—Separate the shoulders from the hips as far as possible.
- 9.—Lie tall and flat.
- 10.—Think tall.

PHILIP LEWIN, M.D.
New York, New York.

"Slow" Epinephrin

GREAT clinical expectations are entertained in connection with a slowly absorbed preparation of epinephrin—a suspension of powdered epinephrin base in purified olive oil. Patients suffering from chronic asthma were relieved for from 8 to 16 hours. Several of these patients had been taking from 3 to 6 injections of from 0.3 to 0.5 cc. of 1:1000 epinephrin solution.—E. L. KEENEY, M.D., in *Bull. Johns Hopkins Hosp.*, Mar., 1938.

The Underweight Child

TO PUT the under-average-weight child to bed with forced feedings is as pernicious and fallacious as to treat routinely the overweight child with endocrine products. I refer now to the child who is mentally and physically more active than the average, usually with no ascertainable pathosis, who is somewhat underweight, fails to gain adequately, and eats poorly. The parents, friends, and too often the physician, decide that the child needs a tonic. In such a case, we must learn of the activities the child must carry on each day. How much time does it spend at school, how much at play, what activities does it have outside of school, what is its total amount of sleep?

Fatigue occupies an important place in

the complaints of childhood. From 10 to 11 hours of sleep are necessary for the school child, and for children up to 6 years, a noon-day nap of 1½ hours is necessary for optimum health.—HENRY DIETRICH, M.D., in *Southw. Med.*, July, 1937.

When to Intervene during Labor

WHEN THE CERVIX is far posterior or lateral, a posterior position or deflection of the head may be the cause and a long labor may be expected. If the opening in the cervix is accessible, the prognosis for a labor of average length is good.

All patients are urged to take liquid nourishment. Solid food is not given because of the hazard of aspiration of particles into the lungs when the patient vomits during or after the administration of an anesthetic.

If a contracted pelvis exists, no operation is practical to increase its diameter, and a test of labor should be followed by a low cervical cesarean section.

Presentation of the cord usually indicates that a podalic version will be necessary.

Occiput posterior position is best corrected by manual rotation of the occiput to the front and application of forceps. In occiput-right-posterior positions, the left hand is inserted, the occiput grasped and rotated to the right anterior position. Before the hand is withdrawn, the right blade is applied, to prevent the head from rotating back. The right hand is used to correct occiput-left-posterior positions, and the left blade is applied. If there is any doubt about the exact position of the head before applying forceps, the hand should be passed up into uterus and the ear felt (the ear always points toward the occiput).

The uterus should always be explored following podalic version and extraction, for possible uterine rupture. Deep anesthesia and injection of 10 minims of Adrenalin (epinephrin) usually relax the uterus sufficiently, but may not do so if the membranes have been ruptured for some time and the uterus has contracted tightly around the child.

A test of labor is defined by some as 25 hours in labor without engagement of the head; others believe that two hours in the second stage, without engagement, constitute a test of labor. In any difficult case, the possibility of cesarean section should be kept in mind, and no vaginal examinations or procedures carried out unless pelvic delivery seems quite feasible.—H. C. GERNAND, M.D., in *Southw. Med.*, July, 1937.

Non-allergic, Non-infectious Vasomotor Rhinitis

THERE is a non-allergic, non-infectious type of rhinitis, which must be differentiated from the acute, infectious type which we call the "common cold," and from the type caused by a specific allergen. This variety, which is not generally recognized, is the cause of 20 percent of the cases of rhinitis.

The *symptoms*, consisting of sneezing, rhinorrhea, and nasal occlusion, come on in the morning, upon arising, and last until 10:00 or 10:30 A. M.

The features which identify it are:

- 1.—Occurs in *females*, chiefly during the menstrual life and generally accompanied by sterility, in 85 percent of the cases.
 - 2.—The blood pressure is low (about 100/68).
 - 3.—The basal metabolism is low (about minus 15).
 - 4.—The pulse is moderately slow (about 66).
 - 5.—Nasal smears show eosinophils in 95 percent of the cases.
 - 6.—There is no family history of allergy.
 - 7.—Skin tests for allergens are negative.
- In these cases, Antuitrin-S, in small doses, and thyroid preparations are often helpful.

HARRY L. HUBER, M.D.

Chicago, Ill.

Improved Surgical Approach to the Gallbladder

USING the following technic, many patients may get out of bed on the *fifth* postoperative day, and return to their homes within two or three days more, following a simple cholecystectomy and appendectomy.

The skin is incised transversely on the line of the seventh intercostal space, from the anterior axillary line to the middle of the right rectus abdominis muscle. The fibers of the external oblique muscle are separated; the anterior and posterior sheaths of the right rectus divided; and the rectus muscle retracted to the left, *thus sparing the intercostal nerves*. The internal oblique is retracted or partly divided; the fibers of the transversalis split; the peritoneum opened; and cholecystectomy performed. The deep layers of the wound are united with interrupted, 30-gauge, soft stainless steel wire, tied with a surgeon's or square knot. We have had no evisceration or serious wound complication from this method.—WAYNE BABCOCK, M.D., in *Rev. Gastroent.*, Dec., 1937.

Diagnostic Pointers



The Significance of Loss of Weight

A GRADUAL loss of flesh, with increasing weakness and pallor, is not uncommon, and occurring after middle life without obvious cause, should always arouse a suspicion of cardiac insufficiency.—A. A. STEVENS, M.D., in "The Practice of Medicine" (Saunders).

Between the ages of 55 and 70, the onset of loss of weight and strength should arouse suspicion of prostatic hypertrophy (and chronic, mild uremia).—E. L. KEYES, M.D., in "Keyes Urology."

Exophthalmic goiter, malignant disease, and tuberculosis, in early stages, may not result in weight loss.—J. W. MURRAY, M.D., in "Examination of the Patient" (Mosby).

Everyone Has Had Sinus Disease

By CAREFUL clinical and x-ray study, it has been demonstrated that 91 percent of scarlet fever patients have sinusitis, mild or moderate. Epidemic influenza and other exanthematous diseases probably have as high an incidence of this condition. At one time or another, practically the entire population suffers from sinus infection.—M. M. CULLOM, M.D., in *E.E.N.T.M.*, Sept., 1937.

Lipstick Dermatitis

LIPSTICK reactions vary from simple itching, with a sensation of burning, to violent impetiginous dermatitis with involvement of lymphatic glands. A simple test: Rub the suspected lipstick into a small patch of skin in the fold of the elbow and see if an inflammatory reaction appears in a day or two.—A. HOROWITZ, M.D., in *Med. Rec.*, June 2, 1937.

Acne and Pseudo-Acne

"UNUSUAL" acne cases should be carefully investigated for other signs of syphilis. Bromides, iodides, or quinine may result in a papular eruption.—H. A. HARE, M.D., in "Diagnosis of Disease" (Lea & Febiger).

Sign of Fetal Death

MILK appears in the breasts when the connection between the placenta and the mother is broken. Hence, the secretion of milk during pregnancy or abortions is a definite sign of fetal death.—DR. K. S. SCHULTZE, in *Zentralbl. f. Gynak.*, April 18, 1936.

Is the Basal Metabolism Test Diagnostic?

HEARTS damaged by thyroid activity occur in individuals with normal basal metabolism rates. Patients have been observed whose readings were normal or low, but with definite evidence of hyperthyroidism, which was substantiated by typical improvement after thyroidectomy. *Metabolic studies in many disease conditions and under various physical conditions have demonstrated increased readings*, so that our faith in the basal metabolism test as an accurate and sufficient estimation of thyroid activity has been considerably shaken.—DR. H. POER, M.D., in *South. M. J.*, May, 1937.

Breathlessness

THE complaint of breathlessness should always be investigated. If it comes on while at rest and is relieved by a few long, deep breaths of the "sighing" type, it is almost certainly not significant of heart or lung disease.—F. A. WILLIUS, M.D., in "Proceedings of Mayo Clinic."

Contraindications to Thyroidectomy

ANY ONE of these conditions is an absolute contraindication to thyroidectomy, until corrected: (1) Circulatory decompensation; (2) rapid, continuing loss of weight; (3) acute thyrotoxic psychosis; (4) diarrhea, vomiting, excessive sweating; (5) rising basal metabolism; and (6) decreased duration of voluntary apnea, or inability to hold the breath.—WILLARD BARTLETT, JR., M.D., F.A.C.S., in *Cur. Res. in Anes. & Anal.*, Jan.-Feb., 1938.

Thumbnail Therapeutics



Chronic Appendicitis

THE most constant symptom of chronic appendicitis is pain or soreness in the region of the appendix. The patient has repeated attacks, with intervening free intervals. The pain is aggravated by exercise, especially running or walking. It may be referred to the epigastrium or downwards toward the thigh. There is often just the slightest rigidity of the right side of the abdomen. Tenderness is not so important. The temperature and the leukocyte count are normal.—G. P. MULLER, M.D., in *Penn. M. J.*, Mar., 1938.

[Those physicians who examine patients coming in from the farm over bumpy roads, have learned that appendicitis can almost be diagnosed if the pain is intensified by bumps or jolts.—ED.]

Consider the Patient

A ROUTINE which, by its enforcement, causes a patient constant worry and irritation, is of very doubtful therapeutic value; either the patient should be brought to a frame of mind whereby he follows the routine voluntarily and contentedly, or the routine should be changed.—ROGER F. LAPHAM, M.D., in "Disease and the Man" (Oxford University Press).

Minor Prostatic Enlargement

MINOR ENLARGEMENTS of the prostate are the result of congestion, superimposed on the stagnation of prostatic secretion. The process is not confined to that portion of the prostate which projects into the bladder, but concerns the prostatic glandular tissue, the smooth and striated muscle of the prostate, and secondary connective tissue growth. If drainage of the prostatic ducts is promoted when the urinary retention is minimal, one can prevent the progression of prostatic hyperplasia.—EDWIN W. HIRSCH, M.D., Chicago, Ill., in *A. J. Surg.*, Nov., 1937.

Preventing "Gas Pains"

INJECTIONS of prostigmin, at regular intervals following operation, will usually prevent abdominal distention. One ampoule of a 1:4,000 solution is given 24 hours before operation, and repeated every six hours until twelve doses have been given.—H. B. HENDLER, M.D., in *W. J. S. G. O.*, Aug., 1937.

Barbiturates in Labor

OVER 10,000 women in labor have received Sodium Amytal or pentobarbital (Nembutal), without any evident ill effects on the fetus in utero or upon the life of the new born baby. Following barbiturate analgesia, only 3 percent of babies required active resuscitation. The infant is sleepy, with relaxed musculature, and a considerable period will elapse before normal, regular breathing occurs. These symptoms appear to be the price paid for analgesia.—S. H. CLIFFORD, M.D., in *Cur. Rec. Anes. & Anal.*, July, 1937.

Care of the Pregnant Tuberculous Patient

SOME tuberculous patients are improved by pregnancy, apparently because the upward pressure on the diaphragm gives physiologic rest to the lungs. Within twenty-four hours after delivery, air should be injected into the pleural cavity on the affected side, to prevent sudden overexpansion and possible hemoptysis. The tuberculous patient should not be permitted to "bear down."—H. C. JAMES, M.D., in *Southwest. Med.*, May, 1937.

Calcium Therapy

THE ACTION of calcium in renal calculi, gallstone colic, and lead poisoning is dramatic. Calcium strikingly reduces the pain and relieves the edema in gonorrheal epididymitis. Calcium stops night sweats, diminishes the amount of sputum, and limits the cough, in pulmonary tuberculosis.—GUY VAN SCOYOC, M.D., in *Med. Rec.*, Aug. 19, 1937.



THE DOCTOR'S STUDY

Our best thoughts come to us from the thinking of others.

Rowe: Clinical Allergy

CLINICAL ALLERGY: Due to Foods, Inhalants, Contactants, Fungi, Bacteria, and Other Causes; Manifestations, Diagnosis, and Treatment. By Albert H. Rowe, M.S., M.D., Lecturer in Medicine, University of California Medical School, San Francisco, California; Chief of Allergic Clinic, Alameda County Health Center, Oakland, California; President, Association for the Study of Allergy. Philadelphia: Lea & Febiger. 1937. Price, \$8.50.

Rowe's claim to fame is based upon his "elimination diets," which are immensely helpful in the diagnosis of food allergy. This volume presents a revised version of the diets, and even more suggestions as to their practical application by the patient and housewife than did his previous volume, "Food Allergy."

This work covers the entire field of allergy, including the theoretical aspects, diagnosis by various methods, treatment of food allergy, gastrointestinal allergy, bronchial asthma, skin conditions due to allergy, migraine, localized allergy in the nose, urogenital system, joints, eye, heart, ear, throat, kidney, and liver, and control of individual food and drug allergies.

A large series of references are given to the literature of the past few years, which makes the volume valuable for the student and general practitioner when confronted with a puzzling allergic problem.

Clinical advice is very much to the point: "Many allergic manifestations tend to occur in definite attacks, separated by periods of complete or nearly entire relief; such attacks may become more frequent and of decreasing severity, until they finally merge into nearly continuous symptoms"; a very carefully taken history may point directly to the factor causative of the allergic disorder; headaches, asthma, abdominal distress, toxicity, and weakness, relieved by

physics, enemas, or starving, may result from food allergy.

In diagnosis and treatment, instructions are given in great detail, so that the physician need not doubt the advisability of any mode of living or treatment, and can give the patient practical, worthwhile advice that may be followed implicitly. Success in treating allergy can be attained only by such patient work.

Williams: Minor Maladies

MINOR MALADIES AND THEIR TREATMENT. By Leonard Williams, M.D., Park Lane, London. Seventh Edition. Baltimore: Wm. Wood and Co. 1937. Price, \$3.75.

Williams' text is an old friend and counsellor on the many less-serious diseases about which we are consulted almost daily. As he says, training and teaching refer only to the more rare and complex illnesses, but give little help on the diagnosis or treatment of colds, sore throats, indigestion, minor glandular insufficiencies, neuralgias, etc.

It is on these topics that Dr. Williams gives full detail as to treatment and etiologic diagnosis. Not the least interesting section is that concerning dyspepsia. Slight degrees of eyestrain, nasal obstruction, hyper- and hypotension, menopausal hypovarism, reverse peristalsis (due to repeated enemas or suppositories), intestinal toxemia due to unbalanced diet, and other causes of indigestion are discussed and their relation to dyspeptic symptoms emphasized. He stresses the fact that dilute hydrochloric acid should be prescribed in much larger doses than are usually given—at least 35 minims, with or before each meal.

Each chapter consists of an informal, interesting, and highly clinical talk on the

causes of the condition discussed, followed by prescriptions and specific directions. A more valuable book for the general practitioner can hardly be imagined.

Bastedo: Materia Medica, Pharmacology, and Therapeutics

MATERIA MEDICA, PHARMACOLOGY, THERAPEUTICS AND PRESCRIPTION WRITING. By Walter Arthur Bastedo, Ph.M., M.D., Sc.D., F.A.C.P., President, United States Pharmacopeial Convention 1930-1940; Member, Revision Committee U. S. Pharmacopeia; Instructor in Pharmacology, Cornell University; Associate in Pharmacology and Therapeutics, and Assistant Clinical Professor of Medicine, Columbia University; etc. Fourth Edition, Reset. 778 Pages, 81 Illustrations. Philadelphia: W. B. Saunders Co. 1937. Price, \$6.50.

Dr. Bastedo's book continues to be a standby in the field of pharmacology and therapeutics. In this edition, there is a general revision of the whole text. Acetyl-betamethylcholine, glycine, antihormones, atabrine, coramine, cyclopropane, dilaudid, dinitrophenol, diothane, divinyl ether, histidine, mandelic acid, metrazol, novatropine, prostigmine, sulfanilamide, testes hormone, and other new remedies are described for the first time, and the sections on other remedies have been rewritten.

This is a book for the practising physician, although the scientific section is complete. Large type, complete indexes, and clear discussions make it a handy reference text.

Dublin and Lotka: Health Progress

TWENTY-FIVE YEARS OF HEALTH PROGRESS. By Louis I. Dublin, Ph.D., Third Vice-President and Statistician of the Metropolitan Life Insurance Company, and Alfred J. Lotka, D.Sc., Assistant Statistician. New York: Metropolitan Life Insurance Company. 1937. Distributed to Libraries and Public Health Specialists.

This volume is sub-titled, "A Study of the Mortality Experience among the Industrial Policyholders of the Metropolitan Life Insurance Company, 1911 to 1935," and as such, it covers statistics gathered from a huge number of insured persons. Nowhere else in the world has such a mine of health information been available, both because of the large group of policyholders and because of the long span of years covered in these records.

It is encouraging to read of the progress which has been made in health matters by the independent medical profession of the United States (despite the howls of those

who would impose State Medicine). Diagnosis has become more exact; i. e. coronary sclerosis, myocardial disease, and essential hypertension replace the old "chronic nephritis." Health lessons are pointed out: Typhoid exacts a heavy toll in small towns and villages, despite the tremendous drop in its general incidence; the seriousness of acute rheumatic fever, due to its crippling cardiac complications; a patient with pernicious anemia may now live with almost a normal life expectancy (mortality rate cut in half by discovery of liver therapy); and, strangely enough, the mortality of exophthalmic goiter doubled during the period of this survey which, although not explained, is probably due to the fact that deaths formerly labeled as "cardiac" in origin, are now correctly labeled as "thyrocardiac deaths" or deaths due to exophthalmic goiter.

Each year about 20,000 persons in the United States kill themselves. "Contrary to prevailing opinion, suicide as a social problem increases consistently with advancing years, and in general, it follows the weariness, disillusionment, and hopelessness of the later years of life, rather than from disappointments of youth."

Every physician in public health who would like to review the achievements of the past and view the achievements which may come with Medicine's advance would do well to ponder over this volume. The Metropolitan Insurance Company is to be congratulated on the publication of such a splendid piece of work.

Padgett: Surgical Diseases of the Mouth and Jaws

SURGICAL DISEASES OF THE MOUTH AND JAWS. By Earl C. Padgett, B.S., M.D., F.A.C.S., Associate Professor of Clinical Surgery, University of Kansas School of Medicine, Kansas City, Kansas; Associate Professor of Oral Surgery, Kansas City Western Dental College, Kansas City. 307 Pages; 334 Illustrations. Philadelphia: W. B. Saunders Co. 1933. Cloth, Price, \$10.00.

This text is intended for dentists, surgeons, oral surgeons, and to a lesser extent, for the general practitioner and student. It is well-planned, profusely illustrated, and written to the point, but by the very nature of its text, it would not seem to be of great benefit to the general practitioner, who refers all cases requiring surgical repair of cleft palate, complicated skin grafts, removal of teeth, and other procedures in which he has no training.

Operative procedures are described well, and include the latest techniques. The use of facial bands in the cheek to overcome the "droop" of facial nerve paralysis is a simple, worthwhile operation that should be more widely known. Studies of the last few years on symptoms resulting from mandibular joint dysfunction are well summarized.

Many dentists and physicians do not yet realize that removal of teeth (not compensated for by bridgework or other dentures) may unbalance the lever action of the jaw, disturb the function of the temporomandibular joint, and result in pains in the side of the head, attacks of dizziness and some deafness due to pressure on the Eustachian tube.

Dr. Padgett calls attention to the fact that responsibility for the cleft palate patient does not end with the performance of a corrective operation, of which he shows a number of beautiful illustrations and sketches, but must go on to include speech retraining so that the patient will not be a social misfit. Dr. M. F. Palmer, of the Brown Speech Laboratory of the University of Wichita, contributes a section on voice training.

The Endocrines

THE ENDOCRINES IN THEORY AND PRACTICE. By Various British Authorities, Being a Series of Articles Reprinted from the British Medical Journal during 1936 and 1937. 270 Pages. Philadelphia: P. Blakiston's Son & Co. 1937. Price, \$3.50.

This group of articles corresponds to the series published in the *Journal of the American Medical Association*, and is valuable for the same reason, because it gives the most modern views on diagnosis and treatment of endocrine disturbances.

Function and dysfunction of the pituitary, thyroid, parathyroid, adrenals, ovaries, testes, and uterus, and menstrual disturbances, are taken up in separate headings. The writing is, for the most part, strongly clinical in tone and practical in application, except for the section on testicular hormone, which does not endeavor to bring out clinical applications.

Purves-Stewart: Diagnosis of Nervous Diseases

THE DIAGNOSIS OF NERVOUS DISEASES. By Sir James Purves-Stewart, K.C.M.G., C.B., M.D. Edin., F.R.C.P., Consulting Physician to Westminster Hospital, and to The West End Hospital for Nervous Diseases; Physician to the Royal National Orthopedic Hospital; Membre Correspondant De la Societe De Neurologie De Paris; Honorary Member of Philadelphia Neurological Society, The American Neurological Association, and the Copenhagen Medical Society; Colonel, Army Medical Service, Retired. Eighth Edition. Baltimore: William Wood & Co. 1937. Price, \$10.00.

Nervous system disease is here grouped under respective symptoms, so that the practitioner, on being confronted with a case exhibiting convulsions, paralysis, incoordination, coma, delirium, involuntary movements, aphasia, pain, abnormal gait or post-

ure, or sleep disorder, may turn at once to the proper section and there quickly scan the different diagnostic possibilities.

Short case histories and clinical photographs illustrate points of importance. Many of the patients were injured during the World War.

The discussion in each section covers the probable diagnoses that can be made from one symptom or sign. Treatment is not taken up, although treatment may often clarify the diagnosis; i.e., narcoleptics are usually relieved by benzedrine or ephedrine, unless an organic condition of progressive nature is present.

The chapter on case-taking covers the clinical aspect of obtaining important symptoms, including the Binet test for mental measurement. Physiologic anatomy (of the nervous system) is presented in the first two chapters, which consist of a simple, well-illustrated exposition of the important aspects of neuroanatomy as applied to clinical practice.

For the physician who has no neurologic consultant within range, this book will simplify the diagnosis of nervous system diseases.

Glaister & Brash: Scientific Detective Story

MEDICO-LEGAL ASPECTS OF THE RUXTON CASE. By John Glaister, M.D., D.Sc., Barrister-at-Law, Regius Professor of Forensic Medicine, University of Glasgow; and James Couper Brash, M.A., M.D., F.R.C.S., Ed., Professor of Anatomy, University of Edinburgh. With 172 Illustrations. Baltimore: William Wood & Co. 1937. Price, \$6.00.

For the scientifically-minded professional man who loves detective stories, but who tends to be apologetic about it, this is the real thing—scientific sleuthing carried to its highest power, and with an impeccable university background which will permit him to read it ostentatiously, in the face of the most highbrow.

On September 29, 1935, on the banks of a picturesque brook in Scotland, near a lovely, isolated stone bridge, the horrified natives found, in bundles and lying promiscuously, 68 pieces of human flesh and largely denuded bones, in a reasonably fresh condition. Two more pieces (a left foot and a right forearm) were found later, at some distance, making 70 in all. The two heads and most other parts were so thoroughly mutilated that identification by ordinary means was wholly out of the question. In fact, at first there was considerable question about the sexes of the remains.

From this gruesome beginning, this remarkable volume proceeds to describe, in full and meticulous details, every step of the processes by which a group of scientists and police officials proceeded to the solution of this apparently impossible problem, by reconstructing the bodies with such scientific accuracy that they were able to give a

description of two women, which permitted their identification as the wife and nursemaid of Dr. Buck Ruxton, of Lancaster, who was proved to be the murderer.

The illustrations consist mostly of photographs of the more important segments of the *corpora delicti*, as they were found, and of the various steps in their reconstruction and identification, with full descriptions of every such step. Your reviewer has never seen the counterpart of this volume, the bookwork upon which is beyond adverse criticism.

For physicians interested in legal matters, and lawyers concerned with medical problems, here is a mine of unusual technical information which can be worked for years. For the robust mystery story addict, it is a treasure beyond price. It is, however, as may readily be supposed, distinctly not a book to be perused by those with sensitive stomachs or overactive imaginations.

Charlesworth: Chiropody

CHIROPODY: THEORY AND PRACTICE. By Franklin Charlesworth, F.B.A.C.H., Founder of the British Association of Chiropodists, and Director of the East Lancashire Foot Hospital; Foreword by W. Sayle Creer, M.Ch. (Orth.), F.R.C.S., London: Actinic Press, Ltd. Feb., 1938 (Second Edition). Price, \$3.85.

Mr. Charlesworth is to be congratulated on his handling of a difficult subject which interlocks so intimately with surgery and medicine. The chiropodist is advised to refer cases of bunions, painful heels, hammer toes, hallux rigidus and flat feet, not responding quickly to conservative treatment, and is cautioned to be on the lookout for vascular diseases so that they may receive proper treatment.

The first section of the volume deals thoroughly with the bones, muscles, and vessels of the lower extremities, and is well illustrated by colored plates. Succeeding chapters take up bacteriology, materia medica, inflammations, corns, warts, nail diseases, skin diseases, circulatory derangements, and flat feet. Treatment is outlined under each condition and is also extensively discussed in separate chapters on paddings, strappings, electrotherapy, and footwear. His use of alternate layers of flexible collodion and gauze as a light dressing and splint is especially interesting. Hydrogen peroxide softens a hard corn for enucleation.

Your reviewer has not found a better volume on diseases of the feet, and can warmly recommend its many large photographs of disease conditions and application of various measures, its diagnostic and therapeutic advice, and its conservative tone, which should make it of great value to chiropodists on this continent, and to surgeons and general practitioners as well.

It is to be regretted that Morton's monumental volume, "The Human Foot," is apparently unknown in England, as his re-

searches have exploded the older theories of weight balance and definitely proved that plantar calluses are a symptom of improper weight distribution on the second and third toes.

International Clinics

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, etc. Edited by Louis Hamman, M.D., Visiting Physician, Johns Hopkins Hospital, Baltimore, Maryland. Vol. IV; Forty-Seventh Series, 1937. Philadelphia: J. B. Lippincott Co. Price, \$3.00.

These brief articles on diagnosis and treatment are fine reading for the physician, no matter what type of practice he may have or what specialty he may confine himself to.

Dr. Israel Bram discusses "Psychotherapy in Treatment of Exophthalmic Goiter"; Tom Spies presents "The Diagnosis of Pellagra" (with many fine clinical photographs of the lesions of the mouth, tongue, and hands); T. C. Goodwin considers, "Chronic Non-Tuberculous Pulmonary Affections in Childhood" (including asthma, bronchiectasis, lung cysts, congenital abnormalities); "Surgical Conditions within the Abdomen" are discussed by nine surgeons and diagnosticians. Other articles refer to tetanus, bladder-neck obstructions, pneumonia therapy, tetanus, and endocrine disorders.

There is no wasted space; the lectures are to the point, and are as clear as they are instructive. The illustrations are reproduced on enamel paper. Both x-ray plates and the photographs are intelligible and add to the interest of the papers.

Wheeler and Jack: Handbook of Medicine

WHEELER AND JACK'S HANDBOOK OF MEDICINE. Revised by John Henderson, M.D., F.R.F.P.S. (Glas.), Physician, Glasgow Royal Infirmary; Professor of Medicine, St. Mungo's College, Glasgow; Hon. Lecturer in Clinical Medicine, University of Glasgow; Examiner in Medicine for Fellowship of R.F.P.S. (Glasgow); etc. Tenth Edition. Baltimore: William Wood and Co. 1937. Price, \$4.00.

The tenth edition of this little (700 page) work was awaited with interest, and is indeed a marvel of compact assembly of facts concerning medical diseases. On examination, however, a distinct sense of disappointment is felt, inasmuch as a number of the sections apparently have not been rewritten in accord with modern knowledge. The x-rays are invoked in tuberculosis only after physical findings have been demonstrated; whereas we well know that the x-rays and the tuberculin test will detect

lesions months before they produce physical signs and symptoms; gallstones do not invariably produce colics, but may result in the symptoms of gaseous dyspepsia, the true nature of which is not realized until a cholecystogram is taken; no mention is made of the newer treatment of peptic ulcer with colloidal, non-alkaline aluminum hydroxides; the clinical symptoms of a widespread bronchiectasis are ignored in favor of the old, traditional expectoration of a huge amount of sputum tending to settle in three layers, yet the patient can be given far more help when the condition is diagnosed early, etc.

The chapter on the treatment of fever is of much practical importance, although emphasis is not laid on the present-day concept of fever as a therapeutic agent. The section on nervous dyspepsia contains many therapeutic pointers.

Waller and Kaatz: German Medical Dictionary

GERMAN-ENGLISH MEDICAL DICTIONARY. By Joseph R. Waller, M.D., and Moritz Kaatz, M.D. Part II. Seventh Edition by Dr. Franz von Braitenberg. Leipzig and Vienna: Franz Deuticke. 1938. Price, M.7.—(\$2.00).

Practically every American physician who reads German literature needs a dictionary now and then, and this compact, pocket-size volume seems to be just the thing. This second part is the German-English, Part I (not included here) being the English-German.

The German words are printed in bold-face Roman letters, which makes it easy to use; the definitions (translations) are brief and to the point; the lexicon appears to be ample for ordinary purposes; and the book-work is good.

Thornton: Medical Formulary

A MEDICAL FORMULARY. By E. Quin Thornton, M.D., Emeritus Professor of Therapeutics in the Jefferson Medical College, Philadelphia, Pa. 14th Edition, Thoroughly Revised. Pocket-size. Philadelphia: Lea & Febiger. 1937. Price, \$2.75.

The busy physician may pick up this small volume, turn to a disease quickly by means of the alphabetical classification, and find complete prescriptions of the drugs indicated, together with notes on accessory treatment and medication by injection or local application. The diseases and symptoms considered range from the most grave to the least severe, and represent ninety percent of a general practice.

The text has been written over to conform with the new U. S. Pharmacopeia and with the latest in medical thought. As Dr.

Thornton states in his preface, "No drug has been accepted by reason of its novelty, nor rejected by reason of its antiquity." Much time is saved by the handy index, in which reference can be made by the scientific and also the common titles (furuncle—boil; freckles—chloasma). The remedies proposed for the treatment of asthma contain many older prescriptions, which are not well known to the younger generation of physicians (lobelia, potassium iodide, stramonium, bromides), yet which are often effective where ephedrine is not, and are of value in liquefying bronchial secretions.

Stitt and Clough: Bacteriology, Hematology, and Parasitology

PRACTICAL BACTERIOLOGY, HEMATOLOGY and ANIMAL PARASITOLOGY. By E. R. Stitt, M.D., Sc.D., LL.D., Rear Admiral, Medical Corps, and Former Surgeon General, U. S. Navy, Retired; President, National Board of Medical Examiners; Head of Department of Tropical Medicine, U. S. Naval Medical School; Associate Professor of Medical Zoology, University of Philippines; Paul W. Clough, M.D., Chief of Diagnostic Clinic, Johns Hopkins Hospital; Associate in Medicine, Johns Hopkins University; Associate Professor of Medicine, University of Maryland; and Mildred C. Clough, M.D., Formerly Fellow in Bacteriology and Instructor in Medicine, Johns Hopkins University. Ninth Edition. Philadelphia: P. Blakiston's Son and Co. 1938. Price, \$7.00.

Within the covers of this one volume, are to be found all the essentials of laboratory diagnosis, both as to the technic of examinations and their clinical significance. The clinician may refer directly to the sections of interest; i. e., laboratory procedures as applied to diseases of the eye, ear, nose or throat, teeth, sputum, pus, skin infections, examinations of cerebrospinal fluid and fluid from serous cavities, examinations of blood by microscopic, chemical and bacteriologic methods, urinalysis, gastric, duodenal and fecal examinations. Under each section he will find simple, explicit directions for taking specimens for examination, and many clinical pointers of value in assessing the value of laboratory procedures used in diagnosis.

The section on parasitology is very complete, as Dr. Stitt has had in mind, "the needs of the man in remote or tropical fields, who does not have access to well-equipped libraries." Hematology has been expanded and full-color illustrations of blood smears added.

A very useful chapter is that on, "Laboratory Procedures Useful in the Diagnosis of Disease." Here are listed several hundred diseases, followed by the laboratory examinations that are of definite value in confirming a diagnosis, or ruling out several

diseases considered in differential diagnosis.

Throughout, the practical aspect is always evident. As there are no procedures given which are not of clinical value, those which are presented are considered fully both as to limitations and advantages, and pitfalls in the acceptance of laboratory diagnosis are stressed.

Philip: Tuberculosis

COLLECTED PAPERS ON TUBERCULOSIS. By Sir Robert W. Philip, M.A., M.D., LL.D., F.R.C.P., Hon. F.R.C.S.E., F.R.S.E., Extra Physician to His Majesty the King in Scotland; Consulting Physician Royal Infirmary, Edinburgh; Professor of Tuberculosis and Examiner in Medicine,

Edinburgh University. London: Oxford University Press. 1937. Price, \$7.50.

This handsome volume represents the fruits of fifty years of tuberculosis study and teaching. As the author states in his preface, he was "born medically" the year that Koch discovered the tubercle bacillus (1882). During the long span of years, he gave many addresses concerning tuberculosis prevention, diagnosis, and therapy, from the viewpoint of both the practitioner and the public health official. He was among the first to advocate open-air treatment of tuberculosis (1890).

Arranged in chronological order are 24 addresses concerning this many-sided problem. All are interesting, especially "The Strategic Front of Medicine Today," which concerns the still greater things to be.

New Books Received

The following books have been received in this office and will be reviewed in our pages as rapidly as possible.

A TEXT-BOOK OF PATHOLOGY. Edited by E. T. Bell, M.D. 3rd Edition, Enlarged and Thoroughly Revised. Philadelphia: Lea & Febiger. 1938. Price, \$9.50.

CIVILIZATION AND DISEASE. By C. P. Donnison, M.D. (Lond.), M.R.C.P. (Lond.). With an Introduction by Sir Walter Langdon-Brown, M.A., M.D. (Camb.), Hon. D.Sc. (Oxon.), F.R.C.P. (Lond.). Baltimore: William Wood & Company. 1938. Price, \$3.00.

THREE YEAR SUPPLEMENT TO NEW MODERN DRUGS. By Jacob Gutman, M.D., Phar.D., F.A.C.P. New York: The American Journal of Surgery, Inc. 1938. Price, \$2.50.

ESSENTIALS OF PSYCHIATRY. By George W. Henry. 3rd Edition. Baltimore: The Williams & Wilkins Company. 1938. Price, \$5.00.

THE PRACTICE OF UROLOGY. By Leon Herman, B.S., M.D. Philadelphia and London: W. B. Saunders Company. 1938. Price, \$10.00.

THE NEW INTERNATIONAL CLINICS. Edited by George Morris Piersol, M.D. Volume I, New Series One, March, 1938. Philadelphia: J. B. Lippincott Company. 1938. Price, \$3.00, current year, not sold separately; \$5.00, back years.

A TEXTBOOK OF CLINICAL PATHOLOGY. Edited by Roy R. Kracke. Baltimore: William Wood & Company. 1938. Price, \$6.00.

PATHOLOGY. By E. B. Krumbhaar, M.D. Clio Medica Series. New York: Paul B. Hoeber, Inc. 1937. Price, \$2.00.

FRENCH MEDICINE. By M. Laignel-

Lavastine and M. Raymond Molinery. Translated by E. B. Krumbhaar, M.D. Clio Medica Series. New York: Paul B. Hoeber, Inc. 1934. Price, \$2.50.

GREEK MEDICINE. By Fred B. Lund, M.D. Clio Medica Series. New York: Paul B. Hoeber, Inc. 1936. Price, \$2.00.

MEN PAST FORTY. By A. F. Niemöller, A.B., M.A., B.S. With a Foreword by Winfield Scott Pugh, B.S., M.D. New York: Harvest House. 1938. Price, \$2.00.

A CHALLENGE TO SEX CENSORS. By Theodore Schroeder. New York: Privately Printed to Promote the Aims of the Free Speech League. 1938.

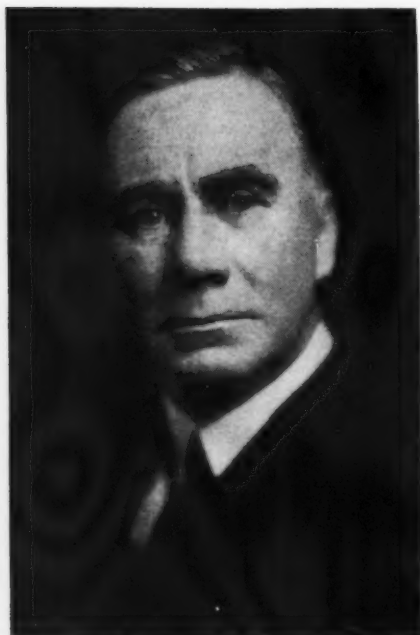
ÄTIOLOGIE DER HERZ- UND GEFÄSSKRANKHEITEN. Edited by Vereinigung der Bad-Nauheimer Ärzte. Dresden und Leipzig: Verlag von Theodor Steinkopff. 1938. Price, RM 10.—.

ELEMENTS OF CHROMOTHERAPY. The Administration of Ultra-Violet, Infra-Red and Luminous Rays through Color Filters. By R. Douglas Howat, L.R.C.P. (Edin.), L.R.C.S. (Edin.), L.R.F.P.S. (Glas.). With Foreword by Sir Henry Gauvain, M.D., M. Chir., F.R.C.S. London: The Actinic Press, Ltd. 1938. Price, \$2.15, postpaid.

ZEITSCHRIFT FÜR RHEUMATISMUS-FORSCHUNG. Edited by Dr. P. Hohler and Prof. Dr. Rud. Jurgens. Vol. I, No. I, January, 1938. Dresden und Leipzig: Verlag von Theodor Steinkopff. 1938.

DER RHEUMATISMUS SERIES. Vol. III. Die Bechterewsche Krankheit. By Dr. Walter Krebs. Dresden und Leipzig: Verlag von Theodor Steinkopff. 1938. Price, RM 6.—.

Medical News



Courtesy, The Chemical Foundation.

Passing of Francis Garvan

FEW LAYMEN have had as profound an influence upon the practice of medicine as that exercised by Francis P. Garvan, who was the instigator and first president of the Chemical Foundation, which, since the World War, has been one of the chief factors in the development of the chemical and drug industry which has taken place in this country. A biographic sketch of him appeared in *CLINICAL MEDICINE* for March, 1925.

After 18 years of ceaseless activity in the service of the chemical industry and the medical profession, and in the development of the chemurgic movement, Mr. Garvan (a recent portrait of whom appears above) passed to his well-earned rest on November 7, 1937, as the result of an attack of pneumonia.

Though the office of president of the Chemical Foundation will not be filled immediately, his work will be taken over, with the title of vice-president of the Foun-

dation, by Wheeler McMillen, president of the National Farm Chemurgic Council and editorial director of *The Country Home*. The Foundation, whose work will remain, as formerly under the able general direction of Mr. William W. Buffum, will continue the splendid service it has been rendering since the War.

School of Tuberculosis

THE 24th session of the Trudeau School of Tuberculosis will be held at Saranac Lake, New York, May 16 to June 10, inclusive, 1938, with an optional supplementary course at Bellevue Hospital, New York City, from June 13 to 25.

Full particulars may be obtained by writing to the School at Saranac Lake.

A. M. W. A. Meeting

THE AMERICAN MEDICAL WOMEN'S ASSOCIATION will hold its national convention at the Fairmont Hotel, San Francisco, Calif., June 12 to 14, inclusive, 1938. An excellent program of scientific and social activities has been arranged.

All women physicians should be familiar with and have a part in the work of this Association. Full particulars can be obtained by writing to Dr. Nelle S. Noble, 1107 Bankers Trust Bldg., Des Moines, Ia.

A. M. A. and American Heart Association

THE 89th annual session of the American Medical Association will be held in San Francisco, Calif., June 13 to 17, inclusive, 1938. This is a splendid chance for physicians in the East and Midwest to combine important graduate instruction with a needed vacation trip to the Pacific Coast. Hotel reservations should be made now.

The 14th annual meeting of the American Heart Association will be held at the Sir Francis Drake Hotel, in the same city, on June 10 and 11, 1938. Full particulars of this meeting may be obtained by writing to the Association at 50 West 50th St., New York City.



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- 4 Taurocol. The Paul Plessner Co.
- 5 Specific Urethritis—Gonoson "Riedel." Riedel & Co., Inc.
- 6 Dr. Weirick's Sanitarium. Dr. G. A. Weirick.
- 8 *Journal of Intravenous Therapy*. Loeser Laboratory, Inc.
- 9 Elixir Bromaurate in the Treatment of Whooping Cough and other Cough Disorders. Report of Cases. (Booklet.) Gold Pharmacal Co.
- 13 A Few Notes Regarding Psychoanalysis. Fellows Medical Mfg. Co.
- 15 Cough—Its Symptomatic Treatment. Martin H. Smith Co.
- 16 The Therapeutic Value of Chemical Foods. Fellows Medical Mfg. Co.
- 17 Feeding Diabetic Patients. Knox Gelatine Labs.
- 19 Menstrual Regulation by Symptomatic Treatment. Martin H. Smith Co.
- 20 Hyperol. A Utero-Ovarian Tonic and Corrective. Purdue Frederick Co.
- 21 Gray's Glycerine Tonic Comp. Purdue Frederick Co.
- 22 Feeding Sick Patients. Knox Gelatine Labs.
- 23 Danish Ointment. Reprint *J. A. M. A.* Acne Rosacea. The Original 24-Hour Treatment for Scabies. The Tilden Co.
- 25 Clinical Guide for Female Sex Hormone Therapy. Schering Corp.
- 26 Gastric Mucin; An Outstanding Advance in Ulcer Therapy. The Wilson Labs.
- 27 Reducing Diets and Recipes. Knox Gelatine Laboratories.
- 29 Colloidal Mercury Sulphide-Hille. Hille Laboratories.
- 30 Ludozan—The Longer Lasting Antacid. Schering Corporation.
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- 44 Appliances for the Mechanical Retention of Hernia. Brooks Appliance Co.
- 46 Vitafer. A Reconstructive Tonic containing Antianemic Factors with Vitamin B. The National Drug Co.
- 50 Gestasol. The Follicular and Luteinizing Fractions obtained from Human Placentas. The National Drug Co.
- 51 Formaldehyde for Urinary Antisepsis. Schering & Glatz, Inc.
- 54 Use of Zinc Borate in Otolaryngology. Hille Laboratories.
- 55 Prontosil (in ampules for injection) and Prontylin (in tablets for oral use)—Chemotherapy of Streptococcus, Meningococcus, and Urinary Infections. Winthrop Chemical Co., Inc.

- 62 Bismuth Subsalicylate in the Treatment of Syphilis. Loeser Laboratory, Inc.
- 68 The Principles of Allergy with Special Reference to Asthma and Hay Fever. The Arlington Chemical Company.
- 78 Argyrol in Urology and Gynecology. A. C. Barnes Company.
- 83 Iocapral. An Arterial Antispasmodic. Winthrop Chemical Co., Inc.
- 89 Free Iodine as a Therapeutic Agent. Burnham Soluble Iodine Co.
- 91 Adrenal Cortex; for the Treatment of Addison's Disease and Asthenia. The Wilson Labs.
94. Haimased for Hypertension. The Tilden Co.
- 95 Low Cholesterol, Low Fat, Low Caloric Diet List for Distribution to Patients. Burnham Soluble Iodine Co.
- 96 Ebulol, a Healing Ointment for Burns, Wounds and Ulcers. Ernst Bischoff Co.
- 99 A Survey in Two Fields of Medicine. A. C. Barnes Co.
- 100 Neo-Plasmoid. The Modern Solution For the Injection Treatment of Hernia. Farnsworth Labs.
- 103 Sarapin. A New Product. High Chemical Co.
- 105 Ovoferin. Iron in its Most Efficient Subdivision. A. C. Barnes Co.
- 107 Merythrol. A New Mercurial Germicide. Chemico Labs.
- 110 Parenteral Calcium Therapy—A Review of the Literature with Comprehensive Bibliography. Loeser Laboratory, Inc.
- 111 Argyrol in Ophthalmology. A. C. Barnes Company.
- 113 Abbott's Iberin. Abbott Laboratories.
- 116 Alparene—An Effective Sclerosing Solution for the Injection Treatment of Hernia. Dequin Physicians' Products Co.
- 118 For the Control of Hemorrhage. Congo Red in the Treatment of Pulmonary, Gastrointestinal, and Genito-urinary Hemorrhage. Associated Physicians' Labs.
- 122 Entromone Tablets. Endo Products, Inc.
- 123 Resumé of Venereal Therapy. Mallinckrodt Chemical Works.
- 124 Soricin in the Treatment of Intestinal Toxemia. The Wm. S. Merrell Company.
- 125 Parenteral Therapy of Strontium. Loeser Laboratory, Inc.
- 126 Subenon—Anti-arthritis and Anti-rheumatic. Seydel Chemical Co.
- 130 Allantoin Ointment 2% in Slow and Non-healing Wounds and in Burns. The National Drug Co.
- 134 The Complications of Pregnancy. Schering & Glatz, Inc.
- 135 Argyrol in Otorhinolaryngology. A. C. Barnes Co.
- 136 Atony—A Cause of Constipation. Wm. R. Warner & Co., Inc.
- 137 Barium Sulfate. Resumé of Use in Alimentary Roentgenology. Mallinckrodt Chemical Works.
- 138 Pollen Products. Abbott Laboratories.
- 139 Standardization of Estrogenic Hormone. Reed & Carnrick.
- 140 Paramon—Analgesic. Seydel Chemical Co.
- 141 The Rise and Fall of pH7.4. Wm. R. Warner & Co., Inc.
- 142 Anabolin. A Detoxicative Hormone from the Liver. The Harrower Laboratory, Inc.

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